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On the Difficulties and Advantages of Catheterism of the Air-Passages in Diseases of the Chest. By Horace Green, M.D., LL.D., &c.

(Read before the Medico-Chirurgical College, Dec. 22, 1859.)

In December, 1854, I read a paper before the Academy of Medicine of New York, "On the Injection of the Bronchial Tubes and Tubercular Cavities of the Lungs;" and subsequently, namely, in March, 1856, I published in the American Medical Monthly a detailed report, containing a statistical table of one hundred and six cases of pulmonary and bronchial diseases, treated by means of catheterism of the air-passages, conjoined with appropriate general remedies.

Still continuing, to some extent, this plan of topical treatment in thoracic disease, I have since had opportunities to confirm the truth of some of my early observations; and, what is of equal importance, to correct other views which later experience and more extended observations have shown to have been erroneous conclusions. It is to record and announce these recognized errors, and to point out some of the difficulties, as well as the advantages that attend this plan of treatment, that I bring, at this time, the subject of Topical Medication before the College.

I propose briefly to consider the following questions:

1. Can the operation of catheterism of the air-passages be performed with certainty and facility?

2. What are the difficulties and dangers of the operation?

3. What advantages are to be derived from this method of treatment?

1. With regard to the first inquiry—the possible practicability of the operation? On this point it will not be necessary long to dwell. As very few of the profession, at the present day, will deny its performance, under favorable circumstances, I shall only refer to the opinion of a few members of the profession, from among many of those who have considered this question.

At the discussion that followed the reading of my paper, to which I have alluded, on bronchial injections, before the Academy of Medicine, several years ago, it was remarked by a distinguished member of that body, who denied the practicability of the operation, that "the Academy must not decide this question until we had heard from Europe on the subject, as the profession there would act without prejudice or partiality."

Already, testimony has come to us from eminent men of the profession, in Great Britain, France, and Germany, that this operation of injecting the bronchi has by them been successfully performed.

Prof. J. Hughes Bennett, of Edinburgh, in his work, "*Clinical Lectures on Medicine*," says: "I have now introduced the catheter publicly in the clinical wards of the Royal Infirmary, in several patients affected with phthisis, in various stages, in laryngitis, and in chronic bronchitis, with severe paroxyms of asthma. * * * I have been surprised at the circumstance of the injections not being followed by the slightest irritation whatever, but rather by a pleasant feeling of warmth in the chest, (some have experienced a sensation of coolness,) followed by ease to the cough, and a check for a time to all expectoration." "These facts are made known to the profession," Dr. Bennett declares, "with a view of recommending a practice which, if judiciously employed, may form a new era in the treatment of pulmonary diseases."*

In Paris, Prof. Trousseau, Loiseau, Blondeau, and others, have succeeded in injecting the air-passages, in various diseases of these parts. It has been employed in early phthisis, by M. Trousseau, as well as in diphtherite, in which latter disease it was attended with complete success.

It has been still more extensively employed by Loiseau, in the treatment of both diphtheritis and croup. The method of Loiseau is thus described by Trousseau, who was appointed by the Imperial

* See Clinical Lectures on Medicine, p. 609.

Academy of Medicine, of Paris, to report upon his plan of treatment: "With the extremity of the forefinger," says M. Trousseau, "he (Loiseau) depresses the tongue, seizes the epiglottis, raises it, and presses the end of the finger between the arytino-epiglottic folds. There is then nothing more easy than to make the end of the tube glide over the finger. The air which escapes through the exterior extremity of the tube proves that it has really entered into the larynx. Through this tube, serving as a conductor, a caustic, the nitrate of silver, for example, or any other medicated substance, may be carried."

In the discussion which took place at the time, before the Academy, on this subject, M. Depaul said, "The process of catheterism of the larynx, as proposed by Dr. Green, was declared by some as being very difficult, even upon the cadaver; but I maintain," said he, "that nothing is easier than this catheterism for those who have performed it a certain number of times." Still more recently than this, comes to us the testimony of Prof. Greisenger, of Germany, as reported in the *Deutsche Klinik*, and in the *Gazette Hebdomadaire*. Prof. Greisenger has been able, as he affirms, to introduce medications of nitrate of silver solution into the air-passages. In regard to the practicability and danger of this operation, Prof. G. says: "For us, after the experiments we have made, we can affirm that these fears are illusory, and that the different parts of the operation can be performed with a rigorous exactitude." And, finally, we have the testimony of the Committee, appointed by the New York Academy of Medicine, to inquire into the truth of the performance of this operation; for they affirm, in their report, made to the Academy, that of the thirty-two patients upon whom the attempt was made to inject the bronchi, the operation was performed in *eleven* cases successfully, and to the entire satisfaction of the committee. It must, therefore, be concluded that the "operation of catheterism of the air-passages," under appropriate circumstances, can be positively performed.

Notwithstanding this operation is being daily performed at the present time, yet it is not always accomplished with certainty and facility. Nature has so guarded the opening into the ærien passages that catheterism of the bronchi is an operation that will be found difficult often to accomplish. In many cases, I am confident, the tube passes over the glottic aperture, and enters the œsophagus, even when the operator feels quite certain that it has been introduced into the larynx. In my own practice I have found myself deceived, not unfrequently, especially in the first years of my experience in this mode of treatment. At first I believed the instrument to have taken the

right course, but afterwards ascertained, in many instances, that it had entered the œsophagus.

2. What, then, are the difficulties that oppose themselves to the facile performance of this operation, and what the dangers?

The *epiglottis* does not of itself close entirely the aperture of the glottis. This cartilage being placed between the entrance of the larynx and base of the tongue, is pressed downward by the abasement of the latter, in the act of deglutition, and being moulded upon, only partially closes the glottis. It is not, therefore, correct to state, as many anatomists do, that the epiglottis "closes completely, of itself, the opening of the larynx," in deglutition.

The arytenoid muscles are the especial *constrictors* of the glottis. These muscles (as Longet has demonstrated) receive filaments from the recurrent nerve. Covering the lips of the glottis is a narrow zone of exquisitely sensitive mucous membrane, which receives its nervous filaments from the internal branch of the superior laryngeal nerve. These two nerves, the one supplying the constrictors, and the other this strip of mucous membrane, communicate freely with each other, but they have no connection whatever with the epiglottis. The irritation of this body, therefore, will have no effect upon either the motive or sentient nerves peculiar to the larynx. This is important to remember, namely: that the epiglottis, in its normal state, is an organ nearly insensible; but when the least irritation of that sensitive portion of the mucous membrane which covers the supra-glottic space occurs, this irritation is quickly communicated to the constrictor muscles, through filaments of the recurrent and laryngeal nerves, and the aperture of the glottis is as quickly shut up. When it is desirable, therefore, to medicate the ærien passages in disease of these parts, it is necessary, as all are aware, to educate the glottic aperture, by repeated cauterizations of this opening. For if, under ordinary circumstances, the attempt be made to pass the sound, or probang, into the larynx before the exquisitely normal sensitiveness of this point of membrane be partially subdued, it will probably prove abortive; or, if successful, and the instrument be made to pass the supra-glottic guard, a violent spasmodic action, not only of the constrictors, but of all the other muscles of the larynx, will occur, followed, often, by great irritation of the parts, and a suffocative cough; and if, under these circumstances, the operator persist in finishing the operation, by injecting a solution of the nitrate of silver into the bronchi, the irritation and cough are both greatly increased, and in some instances inflammation of the bronchial and pulmonary tissue have been awakened, apparently

by these combined disturbing causes. This condition, as the result of these causes, may be illustrated by the following case:

Mrs. F., a widow lady, aged 35, recently returned from California, came under my care July 31, 1858; she was in the second stage of tubercular consumption. Auscultation revealed tubercles, with softening in the right lung. The disease of the lungs had been preceded by follicular laryngitis for many months. The right tonsil, which was still ulcerated, was nearly destroyed, and the pharynx was granular from the diseased and enlarged follicles.

She was placed under general treatment, ordinarily adopted in such cases, together with the application of a solution of nitrate of silver to the throat.

This treatment was continued until the 13th of August, when the parts were thought to be sufficiently prepared to allow the introduction of the injecting tube. On this day I introduced, without any difficulty, the tube, and injected a drachm of the nitrate of silver solution into the right bronchus. No irritation followed the operation. As is the case almost invariably, after injections in either pulmonary or bronchial diseases, the cough and expectoration were considerably diminished for several days after this operation. With intermediate cauterizations with the sponge-probang, the bronchial injection was employed on the 16th, the 20th, and the 24th, with similar beneficial results with the first operation, the patient continuing constantly to improve. On the 26th of the month, in attempting to use the tube, the throat of the patient was found to be unusually sensitive, and it was with some difficulty that the instrument was introduced into the larynx. It was passed, however, into the trachea, in precisely the same way that it had been done on former occasions. A spasm of the glottis immediately succeeded its introduction, and instead of withdrawing it at once, as should have been done, I proceeded to finish the operation, and injected a drachm of the solution (15 grains to the ounce) into the bronchi. By the time the operation was completed, the whole chest seemed thrown into a violent spasmodic action; a convulsive cough, with dyspnœa, followed, which continued during several hours, but was finally somewhat relieved by the use of chloroform, and the administration of anodynes. The cough and dyspnœa, however, with increased expectoration, and pleuritic pains, continued for several days; and, although the patient became in the course of a week quite comfortable again, under general treatment, yet she never entirely recovered the favorable state she was in before the occurrence of the

spasm. As the patient and friends were greatly opposed to any further *topical* treatment, it was never afterwards employed. The pulmonary symptoms increased, the disease progressed, as usual in such cases, and the patient died on the 10th of October, about two months after the last employment of the tube.

Remarks.—The above was a well-marked instance of tubercular disease of the lungs, following a long-continued case of folliculitis; one of those cases, in short, a great number of which in their early stage, in the hands of other practitioners, as well as in my own, have been, and are, successfully treated by topical medication, conjoined with general remedies; and, although a *cure* in this case could not, probably, have been effected, yet, from the favorable progress made before the operation on the 26th, I am confident in the belief that the life of the patient would have been prolonged by the treatment, if it had not been for this untoward occurrence.

A case, similar to the one I have related, came under the observation of my assistant, Dr. Richards. Not having been present when the operation was performed by Dr. R., I take his account of the case.

The patient, Mr. D. M., had been long under treatment for obstinate chronic bronchitis. Topical medication, by means of the tube and sponge-probang, had been repeatedly employed, and the patient had been greatly benefited by the treatment. Mr. M. is the same patient whose case is mentioned by the Committee of the Academy of Medicine in their report, on Bronchial Injections. His case is No. 30; and the Commission thus speak of the success of the operation, as then performed in their presence: "The tube," say the Committee, "was passed without much strangling; the air was freely expelled through the tube. An injection of two or three drachms of a solution of the nitrate of silver, of the strength of thirty or forty grains to the ounce, was then thrown in. All present were satisfied that the experiment was successful." In this instance, as the report affirms, no irritation followed the operation, nor had any irritation attended any previous operations. But on a subsequent occasion, namely, on the 20th of May, 1856, he called to have this tubing operation repeated. Dr. Richards, being in attendance that morning, introduced the tube in the same manner as it had been done, both by Dr. R. and myself, on many former occasions. At this time, however, a spasm, from some cause, was immediately induced; Dr. R. did not withdraw the instrument, but proceeded to inject, as at other times. By the time the operation was finished, the muscles of the

throat and chest were violently convulsed, and this was followed by a suffocative cough and profuse expectoration. This irritation, increased cough, and expectoration lasted during several days; but it finally subsided, and the patient ultimately regained a good degree of health.

I have before stated that Prof. Bennett has employed bronchial injections in the treatment of pulmonic diseases. In the *Edinburgh Medical Journal*, and in his work, recently published, on "Clinical Medicine," he has reported some most interesting cases, in which this method of treatment was employed.

Since the publication of the above work, by Professor Bennett, I have been favored with a letter from him, on the subject of bronchial injections, in which, among other things, he alludes to the occurrence of an accident, in his own practice, similar to those whose history has been given. He writes: "A gentleman, in the last stage of phthisis, with cavities in both lungs, and tubercles very generally distributed among them, after long treatment with the probang, allowed me to inject the bronchi. I did so, and he was immediately seized with the most violent dyspnœa. I thought he would have died in my study. It continued several days, and then gradually declined. After five weeks confinement to bed, he was restored to the same condition he was in formerly. This was six months ago. My opinion is, that he made a too violent effort to hold his breath and retain the catheter, and either ruptured an emphysematous portion of the lung, or caused a small abscess to break, as the operation was followed by abundant purulent expectoration."

In a letter which I have received during the present year, from the distinguished professor of Clinical Medicine in Paris, M. Trousseau, he, among other interesting statements made on topical medication, mentions the occurrence of an accident in his practice, from the use of nitrate of silver solution, under circumstances different from any that have come under my own observation. He remarks: "I often cauterize the interior of the larynx. I sometimes, but rarely, use a hollow caustic holder like that of Dr. Loiseau's, and I have also injected into the trachea solutions of nitrate of silver and sulphate of copper. This practice, in my hands, has never been attended by any danger, and I have never heard that Dr. Loiseau has had any accident to deplore. * * * * I have introduced caustic solutions very frequently into the trachea and bronchial tubes, after tracheotomy, in cases of croup. For six years I never operated for tracheotomy without injecting austic solution." "Once this practice," continues M. Trousseau, "in

my hands, caused the immediate death of a child. The case was as follows: I had operated upon a child two and a half years old; he breathed very well. I dropped into the trachea ten or fifteen drops of a solution of nitrate of silver; a coagulation of thickened mucus, which was in the principal bronchi, immediately followed, and the child died, strangled, in less than a minute." "An accident of this kind," he adds, "can never happen if a sponge, moderately wet with the caustic solution, be used; and with the instrument which you use, a model of which you have sent to me, I cannot see how an accident can occur to the lungs."

It would also seem impossible that this accident, to which Prof. Trousseau alludes, could have resulted from the cause to which he refers it. He had used it frequently before in the same manner, during a period of six years, without the occurrence of any such accident.

During the last winter, it will be remembered that many severe cases of membranous croup and diphtheritic inflammation occurred in some of our larger cities. This was the case particularly in Boston, Mass., in which city the physicians have reported some almost hopeless cases that were saved through the combined measures of tracheotomy, followed by repeated injections of a solution of nitrate of silver, through the artificial opening into the trachea and bronchi. In one instance, as reported in the *Boston Medical and Surgical Journal*, in the case of a child, aged four and a half years, Dr. Gay, assisted by Drs. Bowditch and Perry, "injected through the artificial opening into the trachea, *every four hours*, about one-third of a tea-spoonful of the solution of nitrate of silver, of the strength of 20 grains to the ounce of water." This treatment was continued through several successive days and nights, and resulted in the complete recovery of the patient. It would seem, therefore, that in the case reported by M. Trousseau, the patient must have died from some other cause than the one mentioned, namely: dropping "ten or fifteen drops of a solution of nitrate of silver into the trachea."

Nor is there any need of the occurrence of any accident from the employment of catheterism of the bronchi, if proper cautions are adopted; for, with our present knowledge and experience in the use of this measure, it is one, we maintain, that may be employed with as much safety as any of our other remedial agents.

To the precautionary measures necessary to be adopted in topical medication I shall refer, after alluding to another danger.

When the attempt was first made to inject the trachea and bronchi, it must be remembered that there were no precedents, no

recorded cases, in which this practice had been adopted, to which we could refer, for guiding us in regard to the strength of the remedies, or to the amount of medicaments that could with safety be injected; consequently, it became necessary to proceed with much caution, in the inauguration of this practice. Fortunately, those persons upon whom the attempt was first made to employ this method of treatment, were among those patients who for a long time had been under treatment for laryngeal and bronchial diseases; to whose larynges the sponge-probang had been frequently, and for a long time, applied; consequently they were particularly well prepared for the introduction of the injecting tube, and for the employment of the injections; and it was for these reasons that bronchial injections, in the first instances in which they were employed, were better borne, and were accomplished with more facility, than they have been in most instances since. At any rate, I soon found that in recent cases, I had more difficulty in effecting the introduction of the tube, and that it was necessary to employ, at first, a *very mild* solution, which could be subsequently increased in strength. The following case will illustrate one of the difficulties to which I refer:

In September, 1854, Miss H., a young lady of this city, was recommended to my care, by her friend and physician, Dr. C——, for the treatment of a bronchial affection. The ordinary signs of bronchitis were very marked. Topical applications, of the nitrate of silver solution, were made to the glottis and larynx, and the general remedies, ordinarily recommended in such cases, were administered. This course of treatment was continued several weeks, without producing any decidedly beneficial effect upon the patient. About this time, I saw the patient, on several occasions, in consultation with the physician who had recommended her to my care. He advised a further perseverance in the plan of treatment, but suggested the employment of catheterism of the bronchi, (an operation he had seen performed, in similar cases, several times upon my patients,) if the present measures, after a further trial, should be unsuccessful. But her disease continued to resist the influence of those measures which had proved quite successful in the management of other, apparently similar, cases. On the 7th of November, therefore, the bronchial tube was, with some difficulty, introduced, and nearly a drachm of the solution injected into the bronchi. An unusual amount of irritation followed this operation.

The introduction of the tube induced a spasm of the glottis; the patient coughed severely, and complained, while she remained in my office, of pain in the larynx and bronchi. She, however, left, soon

after the operation, for her house, in the upper part of the city, but did not return for any further treatment. The subsequent history of her case was obtained afterwards, from herself and her mother.

The cough and bronchial irritation continuing after her return home, the patient and her friends became alarmed, and called in their ordinary medical attendant, who, in turn, called in a consulting physician, but both concluded to do nothing, for the irritation gradually subsided, and, along with it, the alarm of the patient and her friends; and, still better, the cough and bronchial disease, which had so long and so obstinately resisted other measures, entirely disappeared, and the young lady has continued in good health, up to the present time.

Spasms of the glottis will, as I have before stated, occasionally occur, caused by the irritation of the supra-glottic space, in the introduction of the tube, although great pains may have been taken to prepare the parts by previous training. In this case, I at first attributed the spasm and subsequent cough and dyspnœa to irritation, produced at the glottic opening. But from some observations and experiments which I have since made, I am fully satisfied that the disturbance in this instance, and probably in the case mentioned by Dr. Bennett, as well as in some others, similarly affected, was caused by the employment, at first, of a solution of too great strength.

I have recently instituted some interesting experiments upon animals, (the cat and dog,) in order to ascertain how strong a solution of nitrate of silver can be borne, when injected into the trachea and bronchi. I experimented upon these different animals, but found the results the same, under similar circumstances, in both the cat and dog. But I will detain the College with the history of only one case.

A young dog, eight months old, weight fifty pounds, was treated by bronchial injections. His jaws were opened by an assistant; a cord being placed around his tongue, it was readily drawn out of his mouth, when the epiglottis, and the opening of the glottis, were seen without any difficulty. I passed the tube quite readily into the larynx, and carried it down eight inches, into the trachea. Here it was allowed to remain several minutes, without producing the least disturbance, while the respired air passed freely through the tube. After a time I injected a small amount of a weak solution of the nitrate of silver through the tube into the lungs of the animal; but, as he did not seem to be at all affected by this, I soon after threw in half an ounce of a solution of the strength of fifteen grains to the ounce. After being released, he commenced playing about as usual, without showing a symptom of any disturbance whatever. The next day he appeared perfectly well, and

was as playful as ever. At 5 o'clock P. M. on the following day, I again introduced the tube into the dog's larynx, and conveying it down, nearly the whole length of his trachea, but not below the tracheal bifurcation, I injected into the bronchi the ounce syringe full of a strong solution of the nitrate of silver, of the strength of thirty grains to the ounce of water. This amount, in proportion to the weight of the animal, would be equivalent to three ounces of the solution of this strength to an adult. The respiration of the animal was not impeded at the time, nor did any signs of suffocation follow immediately this operation of injecting so large an amount of fluid into the air-passages. The dog, for a time, ran about as usual. At 7 o'clock, two hours after the operation, I visited him at his kennel, and calling him out, found him with tail hanging down, eyes dull, and breathing with some difficulty, and uttering occasionally a short cough. On listening to his sides, moist, bronchial, and crepitant râles were heard throughout both lungs. He was allowed to lie down in his kennel. At 10 o'clock I went to him again, when I found that all these symptoms had greatly increased; the dyspnœa was quite difficult, and the dog was disinclined to move about. He died during the night.

I examined the lungs the next day; the bronchial mucous membrane was highly inflamed. Both lungs were inflamed, and gorged with blood; and bloody and frothy mucus blocked up the bronchial tubes. The animal died, therefore, of inflammation of the lungs and bronchi, superinduced by the large and strong injection of a solution of nitrate of silver into the bronchi.

Remarks.—It is evident, then, that nitrate of silver may be used of that strength, and to that amount, in bronchial injections, as to prove fatal to animal life. So, also, may the too frequent use of all or of any of the potent remedies destroy life.

3rd. In relation, then, to the third inquiry, "What advantages are to be derived from this method of treatment?" I reply: bronchial injections of a solution of nitrate of silver, when judiciously employed, have proved to be, and will continue, I believe, to be, a valuable therapeutic means in thoracic disease.

In the commencement of this paper, I referred to the detailed report which was published by me, two or three years ago—a report containing a statistical table of one hundred and six cases of pulmonary and bronchial diseases, treated by means of catheterism of the air-passages, conjoined with appropriate general remedies. The following is the brief analysis given at the conclusion of the report of the above cases: "If we analyze the *one hundred and six cases*, re-

ported in the table, it will be found that *seventy-one* of the sum-total have been recorded as cases of *advanced phthisis*—cases in which tubercular cavities were recognized, in one or both lungs; and *thirty-nine* cases of *early phthisis*. Of the first division—advanced phthisis—*fourteen* have since died. *Twenty-five* were more or less improved; their lives, apparently, being prolonged by this means of medication. *Seven* only of the thirty-two cases of advanced phthisis were not benefited by the injections. Of the *thirty-nine* cases of *incipient tuberculosis*, *twelve* of this division have apparently recovered. *Five* more of this number are now, or were, at the last report, in the enjoyment of a good degree of health. These five cases were classed by my assistant, Dr. Richards, with the twelve recoveries; making *seventeen*, in all, of the thirty-nine cases of early tuberculosis which have apparently recovered.

"Of the remaining *twenty-two* cases, many of whom are still under treatment, *seventeen* have been greatly improved by topical medication; *three* more have been moderately benefited; while *three* only have failed to obtain any advantage from the local measures which have been adopted.

"Of the *twenty-eight* cases of bronchitis, *sixteen* have been dismissed, cured, or so much improved as to require no further treatment. All the others have been greatly benefited."*

This method of treatment, in this class of diseases, has been continued, more or less, since the report to which I have referred was made; and such has been the amount of success which has continued to attend this plan of treatment up to the present time, I am now ready to affirm, after an experience of many years, in a field of observation unusually large, that, *if I was required to relinquish all other known therapeutic measures or topical medication in the treatment of thoracic diseases, I should choose the latter, with hygienic means alone, in preference to the entire class of remedies ordinarily employed in the treatment of these diseases.* But I shall now refer briefly to the opinion of other physicians as to the value of this mode of treatment.

In chronic bronchitis, in asthma, and in early tuberculosis, cauterization of the air-passages has been found to be a most valuable and efficient remedy. As I have stated, topical medication, in the treatment of thoracic diseases, has been continued in my hands since the

* See published "Report of One Hundred and Six Cases of Pulmonary Diseases, treated by Bronchial Injections," &c., pp. 34–5.

publication of the "Report of the One Hundred and Six Cases" to which reference has been made. During this period of three or four years, large numbers of patients, affected with chronic laryngeal and bronchial diseases, with asthma, and with tubercular phthisis, have been treated, and the success which has continued to attend this practice has served to increase greatly my confidence in this measure, as a therapeutic agent. I shall, however, omit a detail of any of these cases coming under my own observation, and only refer briefly to the opinion of other physicians on the value of this mode of treatment.

At a meeting of the French Academy of Medicine, subsequent to the reading of M. Loiseau's paper on Catheterism of the Larynx in Disease, a very favorable report on the management of some of the diseases of the air-passages by this method was adopted; the commission making the report declaring that catheterism of the air-passages in the treatment of diphtheritic inflammation and other kindred affections is not only practicable, but is of great utility.* "I believe this method," said M. Velpeau, "to be a good one. While diphtheritis is at the opening of the air-passages, it is curable, and M. Loiseau has ascertained that it is not difficult to carry medications into the larynx."†

"As a therapeutic means," says the editor of the *Gazette Médicale de Paris*, "it merits a more serious attention. What is the relation of cauterization to croup? It is a powerful, energetic means, *the only one which, up to this time, has really succeeded.* When the disease is limited to the upper part of the air-passages, we cauterize, and all practitioners agree that this means is truly of great benefit. What is laryngeal cauterization other than carrying beyond the limits of ordinary cauterization, a remedy recognized as good, efficacious, not only against the essence of the disease itself, but also against the pathological secretion?"‡ And the learned editor of the *Gazette Hebdomadaire*, after calling attention to what had been done in America in the treatment of croup by cauterization, adds: "These experiments should be repeated by us, with that attention which the authority and the honorable position of our American *confrères* command. M. Loiseau, anticipated, as it is seen, in every particular, has given us, however, a useful example, and his merit will still be great if he succeeds in introducing into use a practice worthy of more attention than it has yet received."§

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* See *Union Médicale*, Aug., 1857. † Ibid. ‡ Ibid.
§ *Ut supra*, Aug., 1857.

During the last year, the *Gazette Hebdomadaire*, and other French journals, have contained the histories of several severe cases of diphtheria, which, under the care of Loiseau, Trousseau, Gros, and other physicians of Paris, were successfully treated, by catheterism of the larynx. In alluding to one case reported by M. Gros, where the diphtheritic inflammation had extended deeply into the air-tubes, threatening immediate suffocation, but which was permanently cured by injections into the larynx, the editor of the *Gazette Hebdomadaire* says:

"This fact has an important practical signification, and speaks loudly in favor of the advantages which may be derived from catheterism of the air-passages, and from topical applications, carried by this measure directly into the larynx and trachea."*

Indeed, M. Trousseau has quite recently expressed, before the French Academy, his want of confidence in all the ordinary violent remedies in the treatment of croup, such as severe vomiting, blisters, leeches, etc., declaring his belief that we must place our main dependence upon direct catheterism, or cauterization of the air-passages, followed, if this measure is unsuccessful, by tracheotomy.

In Dr. J. Hughes Bennett's work, to which I have already alluded, he has devoted a chapter to the consideration of "Injections of the Bronchi in Pulmonary Diseases." He remarks, "Whilst tuberculosis is at first a constitutional disease, its localization in any part reacts more or less on the general health; and the opinion I have long entertained, that any means which could enable the physician to act directly on the tissue of the lung or inflamed bronchi, would assist his efforts at cure, at once led me to take a favorable view of this new mode of treatment. The nitrate of silver ought to act as beneficially on the mucous membrane of the trachea and bronchi as on that of any other hollow viscus, and we have seen previously that the remedy may be applied to the tracheal mucous membrane, by means of an artificial opening, not only without injury, but with decided benefit." He further adds, "Without entering into minute particulars, I have only to say that I have confirmed the statements made by Dr. Horace Green."

The cases in which Dr. Bennett employed this method of treatment, as he states in his work, were, patients "affected with phthisis in various stages, with laryngitis, and in chronic bronchitis, with severe paroxysms of asthma. In other cases in which I attempted to pass the tube, it was found to be impossible; in some because the epiglottis

* *Gazette Hebdomadaire*, Sept., 1858, p. 660.

could not be fairly exposed, and in others on account of the irritability of the fauces, and too ready excitation of cough from pressure of the spatula."*

This, then, is only a part of what has been done in France, Germany, England, and Scotland, in the employment of topical medication in disease. In some of these countries, far more extensive observations on this mode of treatment have been made than in our own country; certainly, more than in our own city! But I shall not stop here to compare the careful inquiries, the scientific observations made, and the frankness and candor exhibited, by the profession of other countries, on this subject; with the course pursued by many of my "American confrères;" nor, especially, with the *non-committalism* of the *New York Academy of Medicine*, before which body this matter of catheterism was first brought; and whose report on this subject has slept for five years, unmolested, on their table!

If necessary, I could give the opinion of many other practitioners, in Europe and America, who have tested topical medication, in the treatment of diseases of the air-passages, and who profess to have derived signal advantage from this therapeutical measure.

I will only refer to some favorable testimony from some parts of our own country. During the last year, as it was remarked on a former page, croup and diphtheria were more than ordinarily prevalent in some of our larger cities. This was the case particularly in Boston; and here, many very severe cases of diphtheria occurred, and some almost hopeless cases were saved by cauterizations of the larynx; and others, by tracheotomy; followed by repeated injections of a solution of nitrate of silver, through the opening, into the trachea and bronchi.

In a report of some most interesting cases of the disease, read before the Boston Society for "Medical Improvement," and subsequently published in the *Boston Medical and Surgical Journal*, Dr. Gay says, "After tracheotomy, and the insertion of the tube, the injection of a solution of nit. argent. through the tube, into the trachea and bronchi, is our strongest dependence, and most of the other measures are mere auxiliaries." "In seven cases of decided membranous croup," says Dr. Gay, "in which these combined measures were employed, and in which the membrane was expelled through the tube, there have been *five recoveries*, and *two deaths*." Many other severe cases were successfully treated by cauterizations of the larynx and trachea, employed before the operation of tracheotomy became imperative.

I shall close this paper by describing the method I employ in prac-

* Clinical Lectures, &c., p. 609.

ticing catheterism of the bronchi. I have received letters from many medical men, requesting me to give them an account of the manner of performing the operation, and a description of the instruments employed. As it has been, and is, impossible for me to comply with all these individual requests, I cannot do better than to reproduce the directions I sent to Prof. J. Hughes Bennett, who several years ago wrote to me, desiring me to send him a description of the operation, and a set of the instruments I employed. My reply is published at length in Prof. Bennett's recent volume of "Clinical Lectures," from which I shall extract.

"I would, with pleasure, send you the instruments I employ, but they are simple, and may be obtained at any surgical instrument maker's shop. They consist of an ordinary flexible, or gum catheter, and a small silver, or glass syringe. The catheter is Hutching's gum-elastic catheter, (No. 11 or 12,) which is 12½ inches in length; and, as the distance from the incisor teeth to the tracheal bifurcation is, ordinarily, in the adult, about eight inches; if this instrument is introduced so as to leave only two inches of the catheter projecting from the mouth, its lower extremity must, of course, (if it enter the trachea,) reach into one or the other of its divisions. I first prepare my patients by making applications, with the sponge-probang, and nitrate of silver solution, for a period of one or two weeks, to the opening of the glottis and the larynx, until the sensibility of the parts is greatly diminished. Then, having the tube slightly bent, I dip the instrument in cold water, (which serves to stiffen it for a moment, and obviates the necessity of using a wire,) and with the patient's head thrown well back, and the tongue depressed, I place the bent extremity of the instrument on the laryngeal face of the epiglottis, and gliding it quickly through the rima glottidis, carry it down to, or below, the bifurcation, as the case may require. It is necessary that the patient continue to respire, and the instrument is most readily passed during the act of inspiration. The tube being introduced, the point of the syringe is inserted into its opening, and the solution injected. This latter part of the operation must be done as quickly as possible, or a spasm of the glottis is likely to occur. Indeed, if the natural sensibility of the aperture of the glottis is not well subdued by previous applications of the nitrate of silver solution, or if the tube, in its introduction, touches roughly the border or lips of the glottis, a spasm of the glottis is certain to follow, which will arrest the further progress of the operation. The *epiglottis, which is nearly insensible,* (and this you may prove on any person, by thrusting two fingers over

the base of the tongue, and touching, or even scratching, with the nail, this cartilage,) should be our guide in performing the operation. The strength of the solution, for injecting, is from 10 to 25 grains to the ounce of water. Commencing with 10 or 15 grains to the ounce, its strength is subsequently increased, and the amount I now employ is from ½ to 1½ drachms of this solution."*

Allow me further to add, that, latterly, in commencing the injections, I have used a solution still weaker than above denoted. When my patients are prepared for catheterism, by repeated cauterizations of the opening of the glottis and larynx, to reduce the normal sensitiveness of the parts, the tube is then introduced, and a drachm of a solution of nitrate argent., of the strength of from 5 to 10 grains to the ounce of water, is injected through the trachea. Afterwards, the solution may be gradually increased in power; but, at the present day, I seldom employ the remedy, in bronchial injections, of a strength above 20 grains of the salt to an ounce of water.

Should a spasm of the glottis occur, as I have before remarked in this paper, on the insertion of the tube into the larynx, the instrument should be promptly withdrawn, and no further attempt be made to proceed with the operation, until the irritation has fully subsided. It is necessary that the applications of the sponge-probang be continued in the intervals of the employment of the tube.

In cases of bronchitis, in asthma, and in early phthisis pulmonalis, even, the use of injections into the bronchi, once or twice a week, operate to diminish the cough, expectoration and dyspnœa, with great certainty, and very many cases of these diseases have recovered under local treatment, after other measures had failed.

On the Resuscitation of Children Born Still. By WILLIAM C. ROGERS, M.D., Green Island, Albany Co., N. Y.

FIRST ARTICLE.

The subject which I propose to treat in this article is one of great importance, but one which has received little or no elaborate treatment at the hands of the profession. A few general directions are given for the resuscitation of the asphyxiated neonatus in the standards on Midwifery, but, aside from the few cases reported in this paper, I have not seen a single other notice of this important subject in the wide range of medical journalism, which I have diligently searched for the past eighteen months.

* "Clinical Lectures on Medicine," pp. 608–9.

In presenting the facts which I have collected, I shall give the reporters' names, the journals or works in which the facts were given to the profession, and the facts themselves, where convenient, in the very words of the reporters. A few facts in reference to the prolonged retention of life by infants who have not breathed, and by infants born still, I shall present at length; the others I shall give in tabular form, best calculated to present them in a compact and striking manner.

The prolonged retention of life by viable infants who have not breathed is a subject bearing directly upon the question under consideration, and I propose to present briefly a few experiments and facts, originally given to the profession in the *Gazette Hebdomadaire* for Dec. 1, 1854, in the *Vierteljahrschrift f. Hoprakt. Heilkunde*, t. iii., 1854, and in the *Assoc. Med. Jour.*, Dec. 8, 1854, and copied from the latter into the *Am. Jour. Med. Sci.*, July, 1855, pp. 264, 266, incl.

The experiments of Legallois show that, in the mammalia, the fœtus that has not breathed can resist death from submersion much longer than the fœtus in which respiration has been carried on. Puppies and kittens, immediately after birth, may be kept under water for twenty-eight minutes with impunity; when five days old, they perish after sixteen minutes' submersion; and, when fifteen days old, they die as rapidly as other warm-blooded animals of any age from deprivation of air. The human still-born fœtus can probably live longer without respiration than any other mammalian fœtus. The following cases are collected in the *Gazette Hebdomadaire* for Dec. 1, 1854, from different sources. They are very striking and very suggestive to the practical accoucheur:

Case 1.—A woman aged 25, who had tried to conceal her pregnancy, was delivered when seated on a tub. The infant was born without any signs of life, was buried in a sand-pit, and after remaining there for half an hour, was removed, and lived. (Dr. Wesse, in *Badisch. Ann. f. Staatsarz*, x., 2, 1845.)

Case 2.—In 1850 a young woman was tried by the tribunals of Berlin, who had buried her new-born male infant, believing it to be dead. After an hour, the infant was disinterred, and recalled to life.

Case 3.—T. P., a servant, aged 23, was delivered in a stable, when leaning against a wall, alone, and in a state of unconsciousness, about half past 4 A. M., Oct. 16. When she came to herself she took the infant, which was perfectly cold, and with the placenta attached, wrapped it up in her apron, and buried it. At half past nine she confessed what she had done, and the infant was dug up from the depth of one foot. It was lying on its face, with the placenta under the abdomen. It was cold, pulseless, and apparently dead, yet the

cord was tied; means were used to reanimate it, and after two hours it cried and took the breast greedily, seven hours having elapsed from its birth to the establishment of respiration. On the 19th it died of convulsions. The case is reported by Dr. Maschka.

Case 4.—A woman gave birth to a child, born still, about noon. Unsuccessful attempts were made to reanimate it for an hour. It was considered dead, and in three hours removed to a cold room. Season, January, and very cold. Here it remained in a coffin all night, with the windows open. At 11 A. M. on the following day—23 hours after its birth—Dr. Maschka saw the child. It was perfectly cold and blue; the eyes and mouth were shut; the joints and the extremities were flexible; there was neither rigidity nor cadaveric discoloration. Astonished at this latter circumstance, Dr. M. applied the stethoscope over the region of the heart, and heard it pulsating feebly and at long intervals. Unsuccessful attempts at resuscitation were made. At the autopsy on the following day, cadaveric discolorations and rigidity were present; the lungs were of a deep red, contained no air, and were heavier than water. It must be admitted—provided the observation of the reporter be correct—that this infant lived twenty-three hours after birth, and never breathed.

Case 5.—A woman was tried for attempting infanticide. She had buried her child in the garden, and it was, after *forty-five minutes*, disinterred from the depth of two inches. It lay on its face, with the placenta attached. The child was resuscitated, and lived.—*Gaz. des Trib.*, Feb. 20, 1850.

Dr. Maschka gives the following summary:

1. New-born infants can live without breathing, under the most unfavorable circumstances, considerably longer than an hour.

2. In such cases, there is obviously not only an arrest of blood in the capillaries of the skin, but the vessels of the different organs are either in a state of permanent contraction, or are filled with a column of stagnant blood.

3. The movements of the heart must gradually become very slow. —*Am. Jour. Med. Sci.*, July, 1855, pp. 264–6.

Dr. J. P. Onvrard, of Angiers, in his *Méditations sur la Chirurgie Practique*, (cited in *Am. Jour. Med. Sci.*, vol. iv., 1829, pp. 247–8,) presents the following remarkable case: On May 14, 1825, Dr. O. examined a male infant born the preceding day at the Maternité, after an ordinary labor. The child had lived 14 hours, as was affirmed by patients and students of midwifery. The child measured 15 inches 9 lines in length, 8 in. 9 lines from the top of the head to the umbilicus, and 7 in. thence to the sole of the feet; was well formed, weighed 4½

lbs.; hair and nails well developed. Dr. O. thought it born at the 8th month. There was a lump on the occiput filled with extravasated blood. The dura and pia mater, just beneath the posterior fontanelle, were ecchymosed, and of a dark color. The lungs were dense, reddish, and heavy, and sank in water in substance and when cut into small pieces. When pressed in water, no air escaped. A few bubbles of air escaped from the right lobe. Aside from this, there was no crepitation.

Dr. O. saw another child which lived 6 hours with no evidence of its ever having breathed, and asks the question, Does cutaneous respiration suffice in these cases for the momentary support of life?

A *résumé* of these cases presents the following points:

Case 1. Born still: buried: resuscitated in 30 mins., and lived.
" 2. " " " 60 " " " "
" 3. " " " 7 hrs., and lived 3 dys.
" 5. " " " 45 mins., and lived.
" 4. " attempts to resuscitate failed: 23 hours after, heart beat feebly, and at long intervals; died.
" 6. " lived 14 hours and then died, never having breathed.

In Cases 4 and 6, there were no evidences of the subject's having breathed.

Dr. O's last case lived 6 hours and then died, never having respired.

Cases 1, 2, 3, 4, and 5, were all subjected to the conservative influence of cold, whereby the cutaneous circulation was greatly depressed, or even arrested. There was consequently but a slight waste of the tissues, little demand for vitalized blood, and less consequent demand for air by respiration. I will call attention again to these facts when considering the proper means to resuscitate the still-born child. Their practical bearing is such as to give them an interest and an importance additional to that which attaches to them as extraordinary, rare, and exceptional cases. They stand in the light of experiments for the resolution of a very important problem, and as such possess great scientific value and interest, as do also the three following cases:

Dr. G. W. Thornton, in the *Cincinnati Lancet and Observer*, Feb., 1858; quoted in *Am. Jour. Med. Sci.*, April, 1858; *N. Y. Jour. Med. Sci.*, Nov., 1858, p. 447. The mother died suddenly, while in labor, from some unascertained cause. Forty minutes elapsed after the last expiration of the mother before Dr. Thornton arrived. On examination, he found that the membranes had been ruptured, that the head was in the cavity of the pelvis, the vertex presenting at the inferior

strait. Dr. T. raised the fœtal head, passed the hand into the flaccid womb, turned the child, and extracted it as far as the head without delay: at this point it momentarily hung, until assisted by the fingers in its mouth. Thus forty-five minutes elapsed from the last expiration of the mother to the complete extraction of the child. The child did not breathe, and was of a bluish color; but a slight ticking could be heard on placing the ear over the heart. The fauces were cleared, Marshall Hall's Ready Method then diligently practiced for half an hour, when a convulsive inspiration took place. This method was persevered in, assisted by aspersions and frictions, and at length respiration was established. The child, a boy of average size, lived three weeks and two days, and then died of neglect.

In vol. xii., part 1, pp. 46, 51, inclusive, of the *Med.-Chir. Trans.*, J. H. Green, Esq., Surgeon to St. Thomas' Hospital, reports a case in substance as follows:

April 15, 1820, a woman 30 years of age, in the 9th month of pregnancy, was run over by a coach and carried into St. Thomas' Hospital, where she died in 20 minutes. Mr. Green and Dr. Blundell performed Cæsarian section within fifteen minutes after the last respiration of the mother, and the child was removed still. A tracheal pipe was introduced, and artificial respiration kept up for 15 minutes, in connection with alternate warm and cold baths, when there were signs of returning life. In five minutes more the child breathed three times; and after 52 minutes of prolonged efforts at resuscitation, the child opened its eyes, and lived 34 hours after its extraction from the mother, and then died from neglect and mismanagement

Dr. Blundell gives an imperfect sketch of the same case in his chapter on "Delivery after the Death of the Mother," in his "Lectures on the Principles and Practice of Midwifery," (edited by Chas. Severn, M.D., Philadelphia, 1842, pp. 371–2.)

Another case was reported in the Berlin *Med. Zeit.*, July 6, 1856. Mrs. H., 41 years old, in the 8th month of her 9th pregnancy, died of puerperal convulsions, after a labor of 31 hours: the child's head presented; the physician in attendance introduced his hand into the flaccid uterus, and in 15 minutes after the mother's death, and 20 hours after the rupture of the membranes, delivered a still child, which was resuscitated in 15 minutes, and lived.

A *résumé* of these three cases presents the following:

Thornton's Case.—Born 45 minutes after mother's death. Ready Method used for 30 minutes; child resuscitated, and lived 3 weeks and 2 days.

Green's Case.—Born 15 minutes after the mother's death: artificial respiration enabled it to attempt to breathe in 5 minutes, but 52 minutes elapsed before respiration was perfect: child lived 34 hours, and died of neglect.

The Berlin Case.—Born 15 minutes after the mother's death: revived in 5 minutes, and lived.

Length of time intervening between the mother's last breath and the establishment of the child's respiration was 75 mins., 72 mins., and 20 mins. Under proper care, we have every reason to believe that the result in the first two cases would have been as gratifying as in the last.

When we reflect that observation by experiment is less applicable to the solution of physiological than of physical or chemical problems, the value of the facts just detailed is most apparent. Physiological phenomena are in general so complex, that in conducting experiments, it is impossible to limit their effects to the organ or function under examination, or to clearly analyze the complex perturbations, and to assign to each organ and function its share in the production of the artificial phenomena. A much more scientific, because simpler and more manageable, method of experimentation, is that in which the organism is affected by experiments instituted upon the food, liquid, solid, and aeriform, upon the exercise, and upon the various habits of life. In this manner we are enabled to induce certain abnormal phenomena suggestive, or in confirmation of, the true theory of the physiological state. Now, the antecedent facts may be regarded in the light of experiments upon the environment, or surroundings of the neonati; experiments which, from the value of human life, no one would deliberately, and in the spirit of scientific research, make; and their value is correspondingly great. They are evidently too few in number to form the basis of reliable calculations, but they tend to show that the limits within which the child's life *may* be preserved are far greater than is generally supposed; and a knowledge of that fact might encourage some of us to labor perseveringly, and perhaps successfully, in cases apparently as hopeless as any of the above. Every new case is a new problem in and of itself, and not an *average;* but the value of collecting many cases and tabulating them is this—it informs us of the limits within which the proposed problem has been successfully solved; and it becomes our duty to labor at least up to those limits, in the conscientious discharge of our functions as preservers of human life.

I come now to consider the means by which the still-born child has been resuscitated, the *rationale* of those means, and the indications of their use, using the following facts as the basis of my inferences:

TABLE.

No.	By whom and where reported or communicated.	Age of Mother.	Mother's condition before and during labor.	Character and duration of the labor.	Condition of child at birth.	Means used to resuscitate the child.	Time before respiration was establ'd.	Remarks.
1	Dr. Patterson, in Dub. *Quart'ly*, cited in *Med.-Chir. Rev.*, July, 1833, p. 265.	24	Premature labor at 8th month, induced by fright.	1st labor, 30 hours' duration.	Still: funicular circulation languid, with feeble motion of the limbs.	Artificial respiration, external warmth, and nasal irritation used in vain for 10 minutes. Water of 60° dashed over it, and used as a bath, with frictions to abdomen; revived.	From 10 to 15 minutes	Child recovered and lived. First recorded instance I can find of the use of cold water for this purpose.
2	J. Toogood, Esq., in Lon. *Med. & Phys. Jour.*, Aug., '27, *Am. J. Med. Sci.*, 1827, pp. 228 & 9. Dewees, *Mid.*, 5th edit., pp. 193 & 4.	.....	Far advanced in phthisis.	First labor at term; much hæmorrhage.	Still.	Artificial respiration with tracheal tube.	35 minutes	Lived. Mr. T. claimed this method as his own. Dr. D. stated that he had used it over 40 years.
3	Ibid., *ut supra*.	.....	.....	Funis prosentation; slow labor.	Still.	*Ut supra*.	30 minutes	Child lived.
4	Ibid., *ut supra*.	.....	.....	Arm presentation; tedious labor.	Still.	*Ut supra*.	45 minutes	Lived.
5	Ibid., *ut supra*.	.....	Mother weak and in bad health.	2nd labor: head and funis presentation; slow labor.	Still, and neglected for half an hour.	As above for 25 minutes before any visible signs of animation: continued 10 mins. longer before child resuscitated.	70 minutes	Lived.
6	M. Higginbotham, in *Lancet*, Am. ed., Feb., 1857, p. 173.	.....	.....	Breech presentation; cord pulseless.	Still.	Hall's Ready Method.	20 minutes	1st case in which the Ready Method was applied after it was announced by M. Hall.
7	Chas. Vaudin, in *Lancet*, Am. edit., June, '57, p. 487.	.....	Mother delicate, and with small pelvis.	2 folds of funis around child's neck, and pulseless.	Every appearance of being dead.	Hall's Ready Method.	31 minutes	

TABLE — *(Continued)*

No.	By whom and where reported or communicated.	Age of Mother.	Mother's condition before and during labor.	Character and duration of labor.	Child's condition at birth.	Means used to resuscitate the child.	Time before respiration was establish'd	Remarks.
8	Communicated by Dr. P. M. Womble, Baltimore.	.....	.....	Breech and funis presentation.	Still.	.....	30 minutes	.....
9	Communicated by Dr. T. J. McKew, Baltimore.	.. ....	.....	Vertex and funis presentation; forceps used.	Still.	.....	45 minutes	.....
10	Communicated by Dr. T. G. Thomas, New York.	.....	....	Same as No. 9.	Still.	Ready Method.	15 to 20 mins.	.....
11	Communicated by Dr. C. R. Gilman, New York.	.....	.....	Shoulder and funis presentation; delivery by version.	Still.	Ready Method.	30 minutes	.....
12	Communicated by Dr. J. F. Jenkins, Yonkers, N. Y.	.....	.....	Feet and funis presentation; cord pulseless 25 minutes before delivery.	Still.	Ready Method.	Gasped in 30m., but did not breathe naturally for over 2 hours.	.....
13	Jas. Nichols, in *Lancet, ut sup.*, p. 488.	.....	.....	3 days' labor: partial placentia prævia: both hands down; version.	Still.	Ready Method.	Over half an hour.	.....
14	H. G. Skinner, in *Lancet*, Sep., '57, p. 262.	.....	....	Head & funis presentation.	Still.	Ready Method.	30 minutes	.....
15	Jno. Mills, M.D., *Lancet*, Oct., '55, p. 288.	.....	.....	12 hours' labor.	Child cold, blue, pulseless, with great quantities of dark sanious fluid discharged per orem.	Alternate hot and cold baths useless. Hot bath and artificial respiration with tracheal tube successful.	over 30 minutes	.....
16	Dr. McWhorter, in *Ed. Jour.*, Jan., '35, cited in *Am. Jour. Med. Sci.*, 1836, p. 249.	.....	.....	Breech: tedious labor; body and head long *in transitu*.	Funis twice around child's neck; funis and heart pulseless.	Warm bath; artificial respiration; frictions; child sobbed in 40 or 50 minutes.	Breathed in 1½ hour, and lived.	.....

17, 18. Dr. Warren, in *Charleston Med. Jour.*, Jan., 1858, (*B. and F. Med.-Chir. Rev.*, July, '58, pp. 211–12,) reports two cases of children born still, and resuscitated by the Ready Method, 1 in 30 and the other in 35 minutes.

19. Dr. Gould reported a case to the Boston Society for Medical Improvement, of a still-born child resuscitated by efforts continued for one hour.

20. Dr. Henry Madge reports (*Lancet*, Oct., 1857, p. 338,) a case resuscitated in rather more than half an hour.

21. In February, 1857, I attended a woman in her second labor, of 12 hours' duration. She was delivered of a large male child, still, which was resuscitated in 20 minutes by artificial respiration, dashes of cold water, and frictions. The mother's pelvis was small, and her first child had been born still, and died.

22. In July, 1858, attended a woman 17 years old, in her first labor, of 9 hours' duration. She suffered severely, and I administered chloroform. The child was born with the cord *five and one-half times* around its neck, pulseless. The child was still, but was resuscitated in 30 or 35 minutes, by frictions, cold dashes of water, and the Ready Method, and lived.

23. In October, 1858, I attended a woman, aged 28, in her third labor, of six hours' duration: breech presentation; child a female, born still, and resuscitated, after great labor, in 20 minutes, by frictions, cold bath and cold douches, and the Ready Method.

24. April 26, 1859, attended a lady 25 years old, in her third labor, and delivered her of a premature child born at 7½ months, very small, dry, wrinkled, appearing about 80 years old, and weighing about 5 pounds. It was still, but was resuscitated in 20 minutes by the Ready Method, but required frequent recourse to the Method for over an hour to preserve it. It lived, and is now doing well on a very small scale.

If we confine our attention, at present, to the cases born still, such cases as we are liable to meet at every labor we attend, we have 24 cases born still and resuscitated by artificial respiration, by baths, hot and cold, by frictions, and by Marshall Hall's Ready Method, applied singly or jointly, from 10 to 90 minutes; the average period intervening between birth and the establishment of respiration being 35 minutes, 30 seconds.

In the case of infants born still, reasoning from the above figures, it is safe to infer that we should continue our efforts at resuscitation from 30 to 40 minutes, and as much longer as the case continued to

hold out any, even the slightest, inducements to persevere. If a child presented no indications of incipient or actual decomposition at birth; if its limbs continued supple, and there was the faintest action of the heart, I should consider myself derelict if I did not continue my efforts to save the child alive for at least one hour. The vital forces are sometimes so tenacious, and human life is so valuable, means and accomplishes so much, that no effort should be spared to awaken the latent forces, to arouse the dormant and sinking energies of nature.

If we add to these cases the one buried and revived in 30 minutes, the one buried and revived in 60 minutes, the one buried and revived at the end of 7 hours, and the one buried and revived in 45 minutes, and the three cases of *posthumous* children—one resuscitated in 75 minutes, one 52 minutes, and one 20 minutes after the mother's last respiration—we then have 31 cases of still-born children living without respiration 1,553 minutes, and all ultimately recovering; being an average of 50 minutes of suspended animation for each child.

With these exceptional cases, the inference becomes much stronger that the still neonati should have the benefit of at least one hour's labor from the physician—nay, it seems to me that the demand becomes imperative to labor for the life one hour, yes, *hours*, if there is the faintest inducement to persevere.

The three cases wherein the heart pulsated at intervals, and the limbs remained supple and lifelike—in one 23 hours, in one 14 hours, and in one 6 hours after birth—indicate the value and necessity of careful auscultation, in every case where our efforts at resuscitation are fruitless of success. Should such a case occur, might not good results be expected from the galvanic battery or from electric shocks applied to the nuchæ and epigastrium? When Nature performs so remarkable an experiment in our presence, she invites us to imitate her example, and exhaust our resources, before we yield the palm to death.

There is another case of interest in this connection—that one reported by Dr. J. Foster Jenkins, of Yonkers—wherein the funis was pulseless for 25 minutes before delivery, and no attempt was made at respiration for 30 minutes after birth, and over 2 hours' constant attention was necessary to preserve the child's life. This case is valuable from the fact that it warns us never to desist from our labors in a funis case to resuscitate the still-born child, because the funis was pulseless for some time antecedent to birth. The powers of nature may be held in abeyance, as in the numerous instances I have cited in this paper, and in a number of similar instances which I have tabu-

lated, and intend soon to publish, under the title of *Statistics of Prolapse of the Funis.* If one or a dozen such cases have occurred, it increases the doubt, of which we are to give the neonatus the benefit.

Account of an Epidemic Diphtheria in the Southern Part of Pennsylvania. By F. S. COSKERY, M.D., Baltimore, Md.

On the sixteenth of October last, having occasion to visit a town in the southern part of Pennsylvania, I availed myself of the opportunity to examine into the nature of an epidemic diphtheria, raging in the neighborhood. In this examination I was much aided by the polite attentions of Dr. Seiss, an excellent practitioner of the region. During the two days of my stay, I had an opportunity of seeing sixteen cases of the disease.

In this epidemic, as far as I could ascertain, the cases all presented great similarity in their rise, progress, and termination. Although manifesting a decided preference for children, the disease, however, did not hesitate to attack older subjects, after the young material had been exhausted. At the period of my visit, it occupied an area of about forty-eight square miles—a tract of country of a rectangular form, about twelve miles long by four broad. It seemed utterly regardless of the laws which usually govern or modify epidemics. Filth or cleanliness—a vigorous or feeble constitution, good or bad habits, wealth or poverty, healthy or unhealthy situations, hill or valley, localities dry or humid, care or imprudence; none of these seemed to exert the slightest modifying influence—neither inviting nor repulsing it. It attacked as well as avoided all these conditions.

The disease had been raging with frightful violence for about (I believe) three weeks, up to the time of my visit, and still is, or was a short time since, lingering in the neighborhood, although on the wane, and, in a great measure, shorn of its terrors. The symptoms were as unique as the epidemic itself. First and prominent among the symptoms was *excessive debility*, which continued throughout the disease, terminate as it might. The following is the description given me by a young man, about 20 years of age, who had been attacked by the disease—which description may be considered as applying to every case in the progress of the epidemic: The debility always manifested itself in some way peculiar to the age and condition of the victim—looming out unmistakably prominent, as a sure indication of the terrible constitutional injury. The narrator said that, while ploughing in

the field and feeling as well as usual, he was suddenly seized with "such an excessive weakness" as compelled him to sit down, holding on to his plough-handle for support. After a few minutes, the debility, in a measure, passed away, and he resumed his occupation; but a few steps were taken, when he was again compelled to stop and rest. Finding himself unable to pursue his work, he started for the house, (distant about one hundred and fifty yards,) which, after great effort and frequent restings on the road, he reached in a state of complete prostration, and "was glad to throw himself on the floor to rest."

The throat, or indeed any other part of the body, was rarely complained of in the early stage of the attack. The excessive and general debility continued, without any attendant symptoms, for from six to eighteen hours, when the patient complained of a roughness, dryness, or burning, "*sticking*" sensation in the throat. When the throat was examined, it presented an appearance as if painted over with vermilion, and afterwards highly varnished. There was not much pain or swelling—deglutition not interferred with—cerebral functions unimpaired—disinclination to answer questions or to converse, (this appearing, however, to be the result of a wish to avoid the exertion rather than of pain or lethargy)—bowels generally quiet—kidneys frequently acting freely in the early stage, although, as the disease progressed, the secretion of urine partially ceased. The pulse, of course, was extremely feeble and frequent. The peculiar appearance of the throat, if the disease was not checked, would continue for six, twelve, or eighteen hours; when patches, of a peculiar bluish-gray, would be observed occupying the whole of the posterior portion of the fauces, varying in size from a pin's head to a dime. His third stage, or phase of the disease, would continue (if unarrested) for about the same length of time the other stages occupied, when the last, and (if I understood the attending physicians correctly) invariably fatal, stage would occur—the croupal respiration, with swelling of the cervical glands.

A frightful and fatal disease, rapidly becoming epidemic, new and unknown to the majority of the profession, springing suddenly upon an unguarded and unprepared faculty—no time being given from their severe and exhausting labors for much reading or consultation with authorities and journals—must have taken the practitioners of this region at great disadvantage, although a more faithful body of skillful and indefatigable physicians could not be desired in any country district.

At first, the disease was supposed, by some, to be the resurrection of the old-fashioned putrid sore throat, which was so fatal before scarlatina took its place, or rather which seemed to merge itself into the

latter disease, rendering it the formidable disease it has of late become. Others thought it a form of scarlatina maligna—although few, who have seen the disease, entertain the idea of its connection with either of these diseases. There was not, in my mind, the slightest doubt as to its being genuine *Diphtheria*, so fully and satisfactorily described by late writers in the "*London Lancet*," and other European journals.

Availing myself of information derived from reading the reports communicated in the journals, I ventured, most respectfully, to suggest, to the gentlemen in attendance on the cases I saw, the adoption of the treatment recommended and adopted generally by the European writers, viz.: free, energetic, and persistent tonic or sustaining constitutional treatment, together with a strong solution (℥j. to f.℥j.) of nitrate of silver as a topical application to the fauces in the first stage, or the stick to the patches, if neglect or accident permitted their appearance. I very much doubt whether the ash-colored patches would appear, if the parts were freely mopped with the solution named, and if, above all things, the constitution were supported; nor do I think that the croupal inspiration would come on, if the patches were touched *in time* by the solid caustic. This embraced all the treatment necessary for the restoration to health of every case which could be seen in time. Dr. Seiss mentions, in a letter to me, that his success has been very satisfactory, not having lost more than four cases in 103, in which these remedies had a fair trial.

The only sequela was a partial paralysis, or, more properly, sense of numbness, of one or other arm, the neck, or lower extremities. In no case, reported to me, did this amount to hemiplegia or paraplegia, and relief was also obtained by the use of sulphate of zinc and quinia.

The ash-colored patches did not seem to me to be false membrane, but a mere exudation, attached, but not adhering, to the mucous surface, as moss is often found on rocks. When separated by the finger, (I succeeded, without difficulty, in two attempts,) after being loosened by the nitrate, the mucous coat underneath appeared paler, and, apparently, more free from disease than the parts not covered. Perhaps this exudation relieved the vessels to a certain extent, but certainly there was no sign of ulceration under the patches. It had a velvety feel to the touch, and a velvety appearance.

From my own limited experience, and that of one who has gone through the whole epidemic, I am convinced that, although this disease is rapid, fearful, and certainly fatal when badly managed, it may be as certainly arrested in its course, and a happy result attained, by a prompt and persistent use of the remedies I have already mentioned—

the suggestion of which is due to the skill, investigation, and study of our European brethren.

It may be well to observe that, in the very district over which this epidemic has traveled, typhoid fever has, for several winters, been the prevailing disease, approaching sometimes the character of an epidemic. There was, however, no case of the latter disease in the neighborhood during my visit, nor has there been one since.

It would be an interesting question, whether the depressing nature of typhoid fever could have given a type or character to the present epidemic, or whether the terrible debility, which constituted the prominent (constitutional) symptom, was influenced by its precursor.

A letter from Dr. Seiss (Jan. 18) informs me that the disease is still lurking in Adams County, but in a milder form, and yielding readily to the remedies proposed.

Poisoning by Phosphorus.

Reveil, of Paris, has lately read a paper on this subject before the Imperial Academy of Medicine, which contains interesting facts and startling statistics. In the interval from 1826 to 1845, the number of trials for poisoning, at the Court of Assizes, was 616, two-thirds of which were for poisoning by arsenious acid, and not a single case attributing death to poisoning by phosphorus. Of 544 cases of poisoning that occurred in England in 1837 and 1838, 186 were occasioned by arsenious acid, 193 by opium, and none by phosphorus. Since 1846, however, a large number of cases of poisoning by chemical matches have been tried at the French Criminal Court. In the trials, on charges of poisoning, from 1846 to 1852, arsenious acid holds first rank as the fatal agent, cupreous salts the second, and then phosphorus. Chevallier and Poirier report 88 cases of suicides and homicides that occurred up to 1858 through the agency of phosphorus products. Poisonings by arsenious acid are diminishing in number in France, but, in the same ratio, poisonings by phosphorus are increasing. In view of this fact, it is well to spread every information possible, on the subject of phosphorus-poisoning, before the profession.

Reveil discusses, in his report, the following subjects: The action of phosphorus on the animal economy, the best treatment of cases of phosphorus-poisoning, the proper process for its detection in fatal cases, and the dangers arising from the sale of phosphorus paste,

(used for the destruction of rats,) and from the manufacture of chemical matches made of ordinary phosphorus. Under the last head, he mentions that Chevallier and Tardieu had reported *against* the employment of ordinary phosphorus in the manufacture of matches, and recommended its substitution with red phosphorus. No measures have as yet been adopted in France on this subject, although the cases are not rare of death in children from eating phosphorus paste, or sucking the ends of matches; although instances of homicide have occurred where the paste from such matches had been mixed with soups or other articles of food; although suicides have frequently taken place, in the case of unfortunate mechanics or poor girls, by melting off the ends of matches, whose poisonous properties they had learned. In addition to these cases, the manufacture of such matches exercises a hurtful influence on the health of the workmen. Headache, worrying cough, sore throat, colic and stomachic pains, are troubles often observed in the manufactories. The physicians of Sarreguemines have noticed that the children employed become etiolated, and the workmen exhibit phosphorescence of the breath in the dark. But in addition, there is the destruction of the bones of the face—a phosphoric necrosis—a great number of observations regarding which have been recorded by Neumann, Strohl, Roussel, Sedillot, Broca, and other surgeons. This affection terminates often in death, or leaves the patient afflicted with incurable symptoms.

Besides these dangerous effects to life, such matches are frequently the cause of fire, from imprudence or design. The latter can be avoided by using the new safety matches, which are covered with chlorate of potassa, sulphide of antimony, and glue. To ignite these, friction must be used against a coating of red phosphorus, sulphide of antimony, and glue. These matches have as yet not been introduced into use in this country.

Red or amorphous phosphorus is an allotropic condition of ordinary phosphorus. This is obtained in small quantities whenever solar light is allowed to act on phosphorus in a vacuum, or in an atmosphere of nitrogen or hydrogen; but, by means of a heat of 170° C., kept up for 10 or 12 days, as proposed by Schrötter, the allotropic condition may be imparted to large quantities of ordinary phosphorus. Red phosphorus is in the form of a red powder, inodorous, setting free no irritating vapors, unaltered by exposure to the air, inflaming only at a temperature of 200° C., passing into the condition of ordinary phosphorus at 260° C., insoluble in ether and bisulphide of carbon,

not capable of combination with sulphur by fusion, and not poisonous.

This *last* property is *the most remarkable*, and it is well attested by Bussy, De Vry, Lassaigne, Reynal, Renault, Delafond, Orfila, Rigout, and Poggiale.

The following are the conclusions arrived at by Reveil in his examination of the whole subject:

1. Ordinary phosphorus inflames tissues with which it comes into contact, and may even burn and disorganize them. In such cases, the inflammation produced is sufficient to explain the death.

2. But, in order that death should occur, these accidents are not *indispensable* conditions. In a large number of experiments performed on animals, no trace of inflammation has been noticed. In such cases, we must admit that it has been absorbed, either in its condition as an elementary substance, or in one of its acid forms.

3. The acids of phosphorus are not poisonous. They, like the strong acids, only produce serious accidents when they are concentrated.

4. Phosphorus introduced in the stomach gives rise to accidents differing in effect according to the mode of administration: whether simply melted in water, dissolved in oils, or in the form of powder or cylinders.

5. In investigating cases of poisoning by phosphorus, it is important, above all things, to find out whether the suspected substances contain phosphorus in a free condition. If it cannot be isolated, an attempt should be made to produce the phenomena of phosphorescence by Mitscherlich's method. (This process consists in placing the suspected substance in a flask along with water and sulphuric acid. To the flask a tube, bent twice at right angles, is attached, which passes through a tube, like Liebig's condenser, that is kept full of cold water. The end of the tube communicates with a receiver. The flask is heated by a spirit-lamp, and, if phosphorus be present, there will be a phosphorescence produced in the part of the tube where the vapors condense.)

6. The amount of phosphoric acid, or the lower acids of phosphorus, when present, may at once be determined; but the expert can only pronounce on the presence of phosphorus when he has recognized the substance itself, or the phosphorescent vapors.

7. The number of cases of poisoning by chemical matches has increased so much, that ordinary phosphorus should be substituted by amorphous, non-poisonous phosphorus.—(*Journ. de Pharm., October*, 1859.) L. H. S.

Observations on Propylamine.

As some attention is being paid to this substance now, on account of its pretended curative powers, a few words on the subject of its discovery and preparation may not be out of place in our MONTHLY. It is a volatile base, homologous with ammonia, and was first obtained by Wertheirn, in 1850. The substance is isomeric with trimethylamine—both having the same composition, $C_6 H_9 N$—and for our present purposes, they may be considered identical. Johnston, in his Chemistry of Common Life, mentions it as existing in the *Chenopodium olidum*, the stinking goose-foot. If this plant be distilled along with a solution of soda, the volatile alkali is given off. It is, however, most abundantly obtained from the brine of herrings which have been kept for a very long time, and is, in fact, the cause of the peculiarly penetrating and offensive odor which such brine gives off. It is likewise given off from the ergot of rye. Johnston suggests that the substance may, at some future time, be useful in the *cuisine*, "in the flavoring of *imitation* fish-cakes, crab, lobster, cray-fish, and oyster-patés, fish-sauces, such as the anchovy, &c., &c. Such preparations as these, by the application of a little skill, may pass off at table, and be made to please the palate as well as genuine salt-water productions, though containing nothing that ever lived in the sea!"—(*Op. Cit.*, ii., 279.) *Degustibus non est disputandum.*

From Gmelin's Hand-Book of Chemistry, vol. ix., we learn that it "is a perfectly clear, colorless liquid, having a strong, pungent, and somewhat ammoniacal odor; forming a thick white cloud when a rod, moistened with hydrochloric acid, is held near it; and that it is soluble in water, conferring alkaline properties on the solution."

The easiest method of preparing it is by distilling herring brine along with potash; although it may be obtained by distilling the flowers of the *Cratægus oxycantha* with soda, or by distilling ergot with quicklime. The hydrochlorate is crystalline, deliquescent, and soluble in alcohol. The propylamine is obtained from a solution of this salt by the action of an alkali.

Dr. Awenarius, of St. Petersburg, first employed this volatile alkali in the treatment of cases of rheumatism, and treated, during two years, more than 250 cases of rheumatic affections successfully with it. He affirms that the pain and fever disappeared the day after its administration. His formula is:

℞.—Propylamine, . . gtt. xx.
Aquæ distil., . . . f. ℥vj.

Add, if necessary, essence of peppermint, with some sugar.

Dose.—A table-spoonful every two hours.

Every 10 grains of the hydrochlorate is stated by the chemists to contain 6 grains of the alkali. Propylamine is already offered to the profession by the importers, and we shall await its trial by the physicians of our country with some interest. L. H. S.

Intra-Pelvimeter: A New Instrument for ascertaining the Diameters of the Pelvis. By GEORGE S. KING, M.D., Washington, D. C.

(Communicated in a letter to the Editor.)

MR. EDITOR—*Dear Sir:* In a lecture delivered a year ago at Bellevue Hospital by Dr. Geo. T. Elliot, the unsatisfactory character of pelvimeters then in use was animadverted upon, and the superiority of the index-finger to those heretofore invented was set forth in such terms as to lead me to ponder on the prospect of supplying this recognized want. The instrument which forms the subject of this article was suggested to me a year ago, by necessity, in a case of suspected pelvic deformity, to which I have before alluded; and I am encouraged to present it to the profession, by the advice of several practitioners who have given it a thorough trial. I was puzzled to know why the end at which I aimed could not be attained by inverting the curves in the ordinary external pelvic calipers, and so controlling them in a journal-box that they might be projected and retracted by means of a piston-rod, attached to the inclosed ends with hinges. Pursuant with the thought, I went to Mr. Tiemann's, 63 Chatham Street, N. Y. City, and got him to insert a pair of steel prongs, with knobbed ends, into a vaginal syringe, attaching them as above, and to mark off the piston-rod into half inches; and the idea was embodied. The distance between the knobs when the prongs are completely retracted is one

inch, and increases, as they are projected, up to five inches and a half, as indicated by the scale; that being the greatest internal diameter of the human pelvis that has come to my knowledge. The instrument may be readily worked with one hand, while one or more fingers of the other be used in adjusting the knobs to the points inside the pelvis, whose relative distance it is desired to ascertain. When this is accomplished, the thumb-nail of the hand holding it may be placed on the scale close up to the cap of the cylinder; the rod then first withdrawn, and afterwards the whole instrument; whereupon, by inspection, the precise diameter sought will be found to be registered on the scale. The piston-rod is supported within the cylinder by passing through a cork. Further description would be superfluous, as the whole idea may be clearly conveyed by a single cut representing the instrument with its rods projected, or, in default of this, by the simple comparison of an unhoused snail with opercula extended. So simple, indeed, did the idea seem to me, that I was content to believe that it had already fulfilled its greatest end in satisfying me of the normal size of my patient's pelvic cavity, till Professor Fordyce Barker, of your city, to whom I showed the instrument, assured me that it had never been extant, and kindly volunteered to present it before the New York Academy of Medicine; this he did in March, 1859. On the occasion, he stated that he had tested it over a hundred times, and had found it to answer the purpose for which it was designed, even to the exclusion of some slight objections which he had anticipated. This opinion has been corroborated in substance by Dr. Elliot, upon the same practical experiments, and by several members of the profession in different parts of the country, who have found use for it. From the limited number of cases for which a pelvimeter is in demand, it is plain that this is not the nature of the thing to bring "about a revolution in the profession;" yet such as it is, if it can be mediately instrumental in saving the life of one mother, or one child, it will thus indemnify your readers for so much space as its introduction may occupy in your journal, and justify me in obtruding it upon their attention. With this hope, I am, sir,

Your respectful and obedient servant,

George S. King, M.D.

MONTHLY SUMMARY OF MEDICAL JOURNALISM.

By O. C. GIBBS, M.D., Frewsburg, N. Y.

Contagiousness of Typhoid Fever.—In the *American Journal of Medical Sciences* for October, Dr. Charles A. Lee, of Peekskill, N. Y., publishes an account of an epidemic of typhoid fever, that prevailed in Westchester County, during the Spring and Summer of 1859. Over fifty cases occurred in all, ten of which were under the immediate observation of Dr. Lee himself. Dr. Lee thinks the cases, so far as they go, present proof positive of the contagious nature of the fever. He says: "All the cases could be traced to one single source, a sporadic case." Again: "With the exception of the first case, all the others, it is believed, can be traced to contagion." * * "Of the physicians who watched its progress, none doubted its contagiousness, after the first few cases." Of the 14 who watched with the first case, 7 took the fever. Of cleanliness and ventilation, as preventive of contagion, he says: "Where great attention was paid to changing frequently the bed and body linen, cleansing the patient's body and limbs daily, and free ventilation, no other member of the family, nor any who watched with the sick, (with one exception,) were subsequently attacked; but where these were neglected, nearly every inmate was seized, and about half who stayed for any length of time in the sick-room." Dr. Lee thinks the interval between the successive cases is from three to four weeks. We consider this paper one of decided interest, as it contains facts, registered by a close observer, bearing upon an unsettled question.

There is one other point in this paper to which we wish to call attention. He says: "*Somnolence* is usually benefited by opiates," and *delirium*, in his opinion, does not contra-indicate their use. "Opiates did not seem, in my own practice, to increase the cerebral disturbance. For the most part, they had a contrary effect."

Our readers will remember that, on one or two occasions, we have advocated the opium treatment in this fever, in former numbers of our Summary.

Arsenic in Menorrhagia.—In the same No. of the *American Journal of Medical Sciences*, above referred to, Dr. A. P. Burns has an article upon the use of arsenic in a variety of uterine affections. His claims for it are rather too immoderate to inspire largely our confidence. He says: "My usual plan of treatment has been, in menorrhagia, if called to the case during the hæmorrhage, to give immediately ten to twenty drops of Fowler's solution, according to the severity of the case, and

repeat it in doses of ten drops every fifteen to twenty minutes, until the hæmorrhage is checked." * * * "In leucorrhœa, I give three to five drops of Fowler's solution, three times a day, and steadily persevere in the use of it until a cure is effected." * * * "In either affection, if there is debility, I use tinc. cinchona comp., ℥iij; tinct. cantharsis, ʒij. M.—Dose, a tea-spoonful three times a day; sometimes add spirits æther, nit. and tinc. opii. camph." * * * "I know of no remedy so effective and so prompt in arresting hæmorrhage in threatened abortion; it seems to suspend at once the contractions, as well as the hæmorrhage. I usually give twenty drops for the first dose, and ten drops every fifteen to twenty minutes thereafter, until the hæmorrhage is checked. In hæmorrhage after delivery, it is equally efficacious, used in the same manner and doses." How an article, that "suspends at once all uterine contractions," can prove of decided efficacy in controlling hæmorrhage after delivery, where firm uterine contractions are necessary to success, is just beyond our comprehension.

Alcoholic Liquors in Tubercular Diseases.—In the same number of the above-named journal, Dr. John Bell, of New York, has an able essay upon the effects of the use of alcoholic liquors in tubercular disease, or in constitutions predisposed to such disease. This essay secured to its author the Fiske Fund prize of two hundred dollars. The essay displays considerable research, upon a subject of very great interest. We have space only for the conclusions.

1. "The opinion so largely prevailing as to the effects of the use of alcoholic liquors, viz., that they have a marked influence in preventing the deposition of tubercle, is destitute of any solid foundation.

2. On the contrary, their use appears rather to predispose to tubercular deposition.

3. Where tubercle already exists, alcohol has no obvious effect in modifying the usual course run by that substance.

4. Neither does it mitigate, in any considerable degree, the morbid effects of tubercle upon the system, in any stage of the disease."

There are but few subjects more difficult to investigate statistically, than the one under consideration. The author has, perhaps, done as well as was possible with the materials at command, but really the conclusion is, with us, quite unsatisfactory. Not because we are particularly partial to its use, as a preventive or curative agent, but because we consider the statistics, the basis of the argument, more likely to lead to error than to truth.

In the essay before us, persons "who often pass several days in suc-

cession without the use" of alcoholic liquors, are "classed among the temperate, even if they occasionally use them to excess." Persons who drink alcoholic liquors daily and freely, if they are not known as drunkards or intemperate men, are classed also among the temperate. Supposing that a hundred persons, who are irregular in their habits, who get intoxicated daily, who are badly fed, badly clothed, and badly lodged, in filthy apartments, should give a greater per cent. of consumptives than another hundred who have not the infamous reputation of being drunkards, and yet, for aught that is stated, may be regular drinkers of good liquors, in such moderation as is compatible with ebriety, what are such statistics worth in investigation of the question of alcohol as a remedy in, or a preventive of, phthisis? We answer, most emphatically, nothing; and yet this is a tolerably fair representation of the argument of the paper. There is certainly a difference between the judicious medicinal use of alcohol, and the beastly use of it by the notorious inebriate; and, with the latter class, there may be other causes operating to produce a greater per cent. of phthisis.

To make a statistical argument worth anything, a comparison should be made between persons in the same locality, having thus the same climatic relations, engaged in similar pursuits, and possessed alike with the comforts of life; one portion abstaining entirely from the use of alcoholic liquors, and the other indulging with rational moderation. There are no statistics extant for such a comparison; hence, we regard the question still open for observation and study.

Removal of Floating Cartilages from the Knee-Joint.—In the *Lancet and Observer* for December, Prof. E. S. Cooper, of San Francisco, has an article upon the above subject, in which a bold plan of treatment is advocated. He says: "My plan of operation for the removal of floating cartilages from the knee-joint is to cut directly down upon the cartilage by a free incision, and remove it at once, when a piece of lint, wet with an evaporating lotion, is laid into the wound, after which a roller is placed as tightly upon the limb as the patient can conveniently bear, commencing at the foot, and continuing above the knee. The limb is kept entirely quiet and cool by the frequent wetting. The patient partakes freely of the spirits of mindereri and opium, if there be pain. A splint is applied to the back of the joint to prevent flexion." After the fifth day, the lint is removed and a poultice applied. He concludes with the following: "How irrational to suppose that the admission of atmosphere into a joint is the cause of the destructive changes which so frequently take place after slight wounds of the knee-joint! I repeat, the cause of these symptoms is a

burrowing of matter, and not the admission of air into the joint; and I court criticism upon the statement."

Our readers will remember Prof. Cooper's treatment of ununited fracture, referred to in the September number of our *Summary*, in which the same views, in regard to free incisions into large joints, were stated.

Punctures in Dropsy.—In the *Boston Medical and Surgical Journal* for December 1st, Dr. E. J. Coxe, of New Orleans, reports a few cases of dropsy, of various localities and causes, cured by simple punctures. He says: "During the past two years, in the wards of the Charity Hospital under my charge, several cases of anasarca and ascites, of different degrees of severity, and resulting from different diseases, have presented themselves, in all of which, by means of a few punctures, all of the fluid has been discharged, gradually, but continuously, without in one instance the occurrence of any unpleasant symptom, and to the clearly felt and expressed comfort of the patient."

Sunken Nipples.—In the *Medical Press* for December 3d, in a lecture upon the "Management of the Puerperal Woman and her Infant, during the Month," Professor Bedford has the following practical remarks: "It will sometimes happen that the nipple is quite sunken and flat, so much so that it will be impossible for the child to grasp it in its mouth. The consequence will be, that the mother is fretted and fatigued by the negative efforts of the infant; and this latter will be defrauded of what it has a birthright claim to—its natural nourishment. It is the easiest thing imaginable to remedy the difficulty. Take an ordinary pint bottle with a long neck, fill it with hot water, then pour out the water, and apply the mouth of the bottle immediately over the nipple; as the bottle cools a vacuum is formed, and thus a powerful but equable suction is produced, which results in elongating the nipple. The bottle is then removed, and the child applied."

Removal of the Neck of the Uterus with the Ecraseur.—Before the Buffalo Medical Association, as per published proceedings in the *New York Monthly Review, &c.*, for October, "Dr. White presented a specimen of cauliflower excrescence attached to the lower segment of the uterus; being one of those spoken of at the last meeting as having been removed by the *écraseur*. It had formerly been the practice of some surgeons to remove these with the knife, but the operation had latterly been abandoned, on account of the danger of hæmorrhage. Of the two cases he had during the last year, where he had

removed the neck and lower part of the uterus by the *écraseur*, both had completely recovered." * * *

"Some writers, in speaking of this instrument, had recommended tightening the chain and then resting occasionally; but Dr. White did not think this necessary; he had not consumed more than five minutes after the chain was on the uterus before its removal, and had not in either case lost more than one or two ounces of blood." * * "Dr. White also reported a case of removal that afternoon (October 14th) of a large fibrous tumor from the uterus, and presented the fresh specimen for the examination of members. In this case he had substituted a wire rope for the common chain in the *écraseur*, and liked the substitute, as he was enabled by it to introduce the instrument well up in the vagina. The patient was thirty years of age, and of a very pale, bloodless complexion; has lost a large amount of blood at different times."

Destruction of the Nerve of a Tooth with Arsenic.—In the *Peninsular and Independent* for December, there is an article upon this subject, copied from the *American Journal of Dental Science.* As the last-named journal does not come to our table, we copy from the former the following, in regard to the manner of using the arsenic:

"The manner in which we have it prepared for use is, to mix gr. 1 of arsenious acid with the same quantity of sulp. morphiæ. The two are thoroughly incorporated, and then divided into thirty parts. Each of these powders is put into a paper by itself. In applying it to a tooth, a small dossel of raw cotton is moistened in creosote, and then placed on the arsenical powder, which it readily absorbs. This done, the cotton is placed carefully over the exposed pulp, and the cavity securely filled with softened wax. It is permitted to remain in the tooth from seven to ten hours; it is then removed, and the pulp completely extirpated to the extremity of the root."

Extirpation of the Parotid Gland.—In the *Chicago Medical Journal* for December, Professor Daniel Brainard, M.D., has an article upon the extirpation of the parotid gland and other glandular tumors, with a report of five cases of successful operation. He says: "The possibility of removing the whole of the parotid gland by operation is hardly called in question by intelligent surgeons. Indeed, it is, at the present time, difficult to understand how it should have ever given rise to the discussions which have been witnessed on the subject." Prof. Brainard says it would not be difficult to collect fifty undoubted cases of removal of the parotid gland, posterior to the record of Béclard, about one-half of which operations have been performed in this coun-

try. Of doubtful cases he says: "For myself, I should look with suspicion upon all cases where the external carotid artery is not divided, and those where the face is not paralyzed." In this particular he agrees with Velpeau and Béclard: they, however, consider great hæmorrhage a necessary condition present in all operations for the undoubted removal of this gland. Differing upon this point, Prof. Brainard says: "I am sure that when the gland is attacked from below, as in McClelland's cases, this artery (the carotid) is often torn across, and does not bleed." In Prof. Brainard's first case, the external carotid was torn across, and did not bleed.

Pneumonia.—In the *Chicago Medical Journal* for December, Dr. Heavenridge has a lengthy paper on pneumonia. We quote one passage in regard to treatment. "In uncomplicated cases of pneumonia, little else will be found necessary than to premise a full bleeding. Should the patient be plethoric, clear the bowels with an active cathartic, and then administer quinine and opium in such quantities as to insure their quieting and sudorific effects; controlling, at the same time, the arterial circulation by means of veratrum viride or digitalis. Should the inflammation be found obstinate in yielding, a blister will be useful in the latter part of the treatment."

The quinine and opium treatment of pneumonia seems to be gradually growing in favor. This treatment, with some variations, we have advocated for some time past, as is well known to our readers. For five years we have not found it necessary even to "premise a full bleeding." We have frequently seen a skin become moist and cough loose, that had resisted bloodletting and antimony, very soon after changing the treatment to quinine and Dover's powders; and seen a pulse come down from 140 to 90 per minute, under the same change. For report of cases, we beg leave to refer to a former paper of ours, in the *Lancet and Observer* for October, 1858, and the *Buffalo Medical Journal* for November of the same year.

White Paint in Severe Burns.—In the same number of the *Chicago Medical Journal* just referred to, is a report of a case of severe burn, successfully treated with white paint, that occurred in our practice about two years since. The patient was a girl aged about eleven years, and was burned from her clothes taking fire while she was alone. "The whole back, from the hips to the shoulders, a surface thirteen inches wide and fifteen long, was completely charred. The back of both arms, from the elbows to the shoulders, was also burned in the same manner."

We did not attend the case until after the fifth day. Taking

charge of the case, we "removed the dressings, and, on cutting through the charred flesh, we found the texture destroyed to the depth of at least half an inch. White paint was applied over the whole extent of the burned surface, and quinine and opium, with brandy, was administered internally." The bed was covered with oil silk, and the suppurative discharge became fully established on the ninth day. The discharges were extremely profuse, exhausting, and long continued. The lead dressing was covered mainly throughout, with some little variation occasionally in the form of application. Dry tannin was also sprinkled upon the surfaces occasionally. Recovery was not complete until after about fourteen months.

Judging from this case, we should think the danger of lead-poisoning from absorption had been overrated.

In that report, we made one practical remark that we consider important, and shall take the liberty to quote it here. "The friends were directed not to wash the sore at all. Through the repeated importunities of neighbors, an attempt was made to use soap and water, in cleansing the sore, at one time in our absence, perhaps about three months after the receipt of the injury. The pain it occasioned was extreme, and the sores inflamed considerably, and did not recover their former state for several days. Strange as it may seem, healthy pus is the best possible protection to healthy granulations, and the best security against their unhealthiness. When new dressings were applied, the sores were quickly and very gently wiped with dry lint only."

An explanation in regard to this case is required. We here say that fourteen months were required to effect a cure, and in the paper referred to it is stated that the sores were healed at the end of the tenth month. The above referred to report was written last March, at which time we supposed the cure was complete. We were, however, subsequently called to the case, and a cure was not effected until four months later.

Removal of Bleeding Tumor with Ecraseur.—In the *Nashville Journal of Medicine and Surgery* for December, Professor Paul F. Eve reports the removal of a bleeding tumor from the lip of an infant. The tumor was removed with the *écraseur*, without hæmorrhage. The tumor was four inches in circumference, and was removed in three minutes, leaving a smooth surface. Prof. Eve says: "Altogether, the method of operating was very satisfactory, and I am confident that by none other could the tumor have been removed with such ease and safety."

We had looked upon the *écraseur* as an unscientific novelty in surgery, that was soon destined to neglect and oblivion; but when such surgeons as Paul F. Eve, M.D., speak of it as above, we feel compelled to reconsider our judgment.

Influence of Quinine and Malaria over Pregnancy.—The idea has been several times advanced, during the last year or two, that quinine had a tendency to produce abortion, when administered to the pregnant female. To this idea we have never given our assent; believing that the diseases or conditions, to remedy which quinine was administered, was doubtless the cause of abortion, when it occurs under such circumstances. In the *Nashville Journal of Medicine and Surgery* for December, Dr. Davidson, of Arkansas, reports a case of threatened abortion, caused by malaria, and successfully treated with quinine. Dr. Davidson says: "Knowing the patient to have been the subject of intermittent fever the summer and fall previous, it occurred to me that perhaps malaria was the cause of the uterine disorder. I therefore administered between fifteen and twenty grains of quinine the next day. She had no return of pains for about three weeks, at the end of which time they came on again. I stopped them with laudanum, but they returned daily, until I gave quinine." * * "I several times withheld the quinine for a day or two, when the pains would invariably return; but when it was administered regularly it never failed to keep them in check." The above case, so far as it goes, negatives the idea that quinine develops uterine contractions.

Hæmaturia.—In the *New Orleans Medical News and Hospital Gazette* for November, the editor makes reference to a form of hæmaturia, supposed to be of miasmatic origin. This calls forth the report of a case, in the Dec. issue of that journal, by Dr. Wm. E. Brickell, of Vicksburg. In the case reported, the patient had four attacks of profuse hæmaturia. In the first, he was successfully treated with quinine, opium, and camphor. In the second attack, Dr. Brickell says, "he lost a vast amount of blood; I saw nearly a quart that had passed just before I reached the house." Under the use of quinine and brandy, he again gradually recovered. Several weeks later, he had a third attack, and "came near dying." Again he recovered on the brandy and opium. A month later, he had a fourth attack, and being opposed to quinine, died without treatment. Dr. Brickell says: "I had never seen or heard of such a case, yet I was satisfied that the hæmaturia was but an effect of the chill, and my reasons for so thinking were as follows: There was no fever—the pulse was as fre-

quent as one hundred and fifty, but *small and utterly without force;* no pain in the lumbar region, or in the bladder or urethra; he had received no mechanical injury to account for the hæmorrhage, and it always occurred at the time the chill came on, and ceased as it went off."

Ovariotomy.—In the *Boston Medical and Surgical Journal* for December 15th, Dr. P. Simonton, of Searsport, Me., reports a case of ovariotomy, eventuating in perfect recovery of the patient. The patient was 35 years old, and unmarried. The operation was performed on 17th October, by Dr. McRuer, and the ligature came away on the 43d day. "The tumor was multilocular in structure, the cells varying in the capacity of holding from one to five or six fluid ounces; the tumor weighing, solids and liquids, 25 lbs." This is the second successful operation of ovariotomy that has been reported during the month of December—each was performed in a country town, one in Ohio, and the other in Maine. It is hard for European city surgeons, of world-wide reputation, to believe that country physicians are surpassing them in successful results after this operation, but such is the fact. He who will carefully examine the history of the healing art will be surprised to see how much of progress, not only in surgery, but practical medicine, has originated with country practitioners.

In-growing Nail.—In former numbers of our *Summary*, we have given two methods for curing this somewhat troublesome affliction. In the *Boston Medical and Surgical Journal* for December 15th, the editor has the following for cases of moderate severity: "A piece of soft felt, such as is used by piano-forte makers, about half an inch thick, is cut into a wedge shape, and inserted between the great-toe and the second, the point forward. The size of the wedge must be regulated by the circumstances of the case, the object being to separate the toes, so as to remove the pressure of the second toe against the internal angle of the great toe-nail, care being taken that the toes are not pushed too far apart. The nail should be allowed to grow to the end of the toe, and the internal corner must not be pared away, as is often done."

The Effects of Vaccination after Natural Variolous Inoculation.—In the *Semi-Monthly Medical News* for December 1st, Dr. H. L. Givens has an interesting report upon the effects of vaccine virus, when introduced into the systems of persons exposed to natural variola. The subject is an interesting one, and, in its handling, several cases are reported, in which persons have been vaccinated, even several days after exposure to small-pox, and with the effect of an entire pre-

vention of that loathsome disease. Dr. Givens says: "Hence we may infer that, in the use of the vaccine virus, we have a sure and certain prophylactic in arresting and mitigating the virulence of this loathsome disease, even days after exposure." Upon this point he quotes Prof. Rogers, of Louisville: "In a number of instances, how many he cannot say, in both children and adults, he has introduced the vaccine virus after exposure to the poison of variola, with the effect, in a large proportion of cases, of complete protection. In all of the cases, vaccination was promptly resorted to within one to two days after exposure."

Dr. McDowell, in the *American Journal of Medical Sciences* for October, 1857, in an article upon this subject, says: "Vaccination will check small-pox, even after exposure to contagion, provided the virus has time to enter into the system."

In the winter of 1849 and '50, we were called to see a young man, upon whom a genuine variolous eruption was just making its appearance. There were six other members in the family, varying from two to forty years of age, all of whom had been vaccinated except the two youngest, whose ages were respectively two and four years. From our report of this case, made nearly three years later, and published in the *American Journal Medical Sciences*, for October, 1852, we quote the following: "On the following day I vaccinated those who had not previously been, with vaccine matter which was several years old. The vaccine disease was produced in the oldest of the two, but not in the younger. On the third day from the first vaccination, I revaccinated the younger, and the vaccine disease failing to appear, on the third day after the last vaccination, I performed variolous inoculation; but, fortunately, on the following day, the vaccine disease was manifested through the first vaccination, and it run its regular course, *rendering the variolous inoculation abortive.*" The child escaped all evidences of small-pox, though there was but one room in the house, and that confined and filthy, to which the child was confined from the first. In this case, the child had been with the sick man from the first manifestation of the disease, and not the least evidence that the vaccination had taken effect was discoverable until the *eighth* day after the manifestation of the eruption in the young man, and yet *the vaccination proved perfectly protective.*

Palatable Medicines.—In the *Semi-Monthly Medical News* for Dec. 1st, Dr. T. E. Jenkins has an article upon the above subject, from which we make an extract or two.

"The operation of sugar-coating pills is very simple, and may be

practiced by any one. It is done thus: After the pills are finished, they should be rolled between the fingers, previously moistened with thick mucilage of gum-arabic, and while still wet, thrown together in a capsule or saucer containing a sufficiency of very finely-powdered sugar, and rotated therewith until the surface is completely covered, after which they may be exposed to a gentle heat to dry them. If necessary, this process may be repeated in order to give a thicker coating." * * * "Powders may be mixed with aromatized sugar, in order to disguise their nauseous qualities, and every practitioner should be provided with a few bottles of sugar aromatized with orange, lemon, peppermint, or other agreeable volatile oil, so as to have always at hand the means of rendering less disagreeable the chartulæ for his little patients." * * * "A very elegant *bonbon* may be made by incorporating powdered drugs, or even medicinal extracts, with pulverized aromatized sugar and white of egg, in the manner in which confectioners make their 'icing' for cakes, and dropping on a tile from the truncated end of a paper cone portions of the mixture suitable for a dose, they soon dry when exposed to the air, and will be eagerly sought after by children."

Menstruation without Ovaries.—Before the Philadelphia County Medical Society, Dr. W. L. Atlee read a very interesting paper upon the "Diagnosis of Ovarian Tumors." We invite attention to a remark of peculiar interest. We quote from Dr. Atkinson's report in the *Medical and Surgical Reporter* for December 17th:

"The presence or absence of the catamenia is of little account; for even when both ovaries have been diseased, the menstruation has gone on with great regularity. He mentioned a case in which he had removed both ovaries, and yet the menses recur regularly. He also illustrated this point, by relating the case of a young lady from whom he had removed both ovaries; and some time after she informed him that, at the usual period, she experienced a sensation as though her catamenia were about to recur, connected with a whitish discharge from the vagina."

If it be a fact that women can menstruate regularly after both ovaries have been removed, then our notion of the ovarian function, and of the source of the catamenial secretion, must be somewhat modified. Prof. J. W. Draper's "Physiology" lies before us, from which we quote, (p. 520.) "So long as these periods continue, the individual possesses the reproductive power."

Can a woman conceive without ovaries? If Dr. Atlee's observation is correct, the language of Dr. Draper, above quoted, needs modification.

Diagnosis of Ovarian Tumors.—In the above-mentioned paper of Dr. Atlee, as given in the *Reporter*, the author says: "One of the most important means of diagnosis (of ovarian tumors) is tapping; it gives us undoubted information of the absence or presence of ovarian disease, adhesion, and the character of the tumors. It should not be performed at an early period of the disease, except in reference to the propriety of ovariotomy, or to relieve urgent symptoms. On the other hand, however, the operation of ovariotomy should never be attempted without previously having employed this means of diagnosis. The only two operations performed in Philadelphia, where no tumor was found to be present, were neither of them diagnosticated by this *indispensable* means."

A New Suture.—In the same number of the *Medical and Surgical Reporter* just referred to, Dr. W. L. Atlee describes a new suture. "It consists of the common 'blue needle,' and a gum-elastic ring, which is passed over the ends of the needle after it has been passed through the edges of the wound. The great advantage to be derived from it is, that it yields to the swelling of the part, and as the tumefaction subsides, again draws the wound together, always keeping the edges in apposition." * * * "These rings are readily procured, by making smooth sections from tubes of gum-elastic, of the required size."

Treatment of Dropsies.—In the *Medical Press* for December 17th, Dr. William W. Gregory, of Virginia, has an article of considerable length upon the pathology and treatment of dropsical diseases, in which he professes to differ from the profession in general upon the pathology of such diseases, and claims for his treatment novelty, originality, and unprecedented success. He advocates his views with great earnestness, and gives illustrative cases in proof of remarkable success. He makes one remark, he says, without fear of cavil, that to us seems a little extravagant: it is, that in a patient once cured by his treatment, "*the disease never afterwards occurs.*" (The italics are his.) Can he give us some plan of treating fractured bones that will insure against any possibility of their being broken again!

He assumes "DEBILITY to be the starting-point of dropsy," and vegetable acids he thinks the most efficient curative agents. Vinegar is the acid he selects, and the remedy he extols. As remarkable success is claimed and criticism courted, we shall quote the treatment, omitting the criticism. "The treatment I recommend commences with the production of slight ptyalism, or, rather, of *incipient* ptyalism. After which I proceed at once to the use of the vinegar and carb. of iron,

in the proportion of two drachms to the quart, and giving daily one wine-glassful morning, noon, and night." * * * "I also direct the patient to eat, every day, large portions of fried onions or garlic, and to chew the bulb of the squill in large portions. What is remarkable with the last-mentioned remedy is, that it does not nauseate, when given in these immense quantities; but, on the contrary, becomes grateful to the patient; and the vinegar, or vinegar and water, he will prefer to any other drink. Water I do not allow to be used alone, but always together with vinegar. I recommend the use of any nutritious food whatever, with which I usually order black or red pepper in large quantities." * * * "Of course it is necessary to keep up a regular action on the bowels; and this is best accomplished by the cream of tartar and jalap, and will be exemplified in the cases."

On turning to the cases, we find equal parts of jalap and cream of tartar given daily in dessert-spoonful doses. We have here for treatment, calomel to ptyalism, jalap and cream of tartar in full doses, squills in very large doses, fried onions, garlic, iron, and vinegar, administered to all cases, and yet the remarkable success is ascribed to the vinegar! We give the plan of treatment as probably possessing considerable merit, but we trust the author will not blame the reader if he thinks, with us, that the vinegar is probably the least important of the long list of remedies. Justice will not be done to the author without reference to one more peculiarity of his treatment. He says:

"I always resort to the operation of tapping, as soon as the presence of water is perceptible, no matter how small the quantity. When this is made use of early in the disease, there is a chance that the parts may recover their tone, &c."

Abdominal Tumors mistaken for Ovarian.—In the *Semi-Monthly Medical News* for December 15th, Dr. W. L. Sutton reports an interesting case of abdominal tumors that was mistaken for ovarian disease by several physicians. At first two distinct tumors were felt, and they continued to enlarge for fifteen years, when the patient died. An autopsy was had. The liver was found "enormously enlarged, extending to the pelvis. For some little distance below the edge of the cartilage it was of a proper color. The gall-bladder was large, and distended with healthy-looking bile. But the lower portion of the liver was dark and colored, thickened, and having several spherical elevations of different sizes, one of which, in size of a section of one-third of an orange, was situated in the line below the right iliac region and the hypogastrix, and was very evident before death." * *

"Upon lifting the bowels, a fleshy tumor appeared, of some five inches in diameter and ten long, running upward and towards the left side. It was more or less intimately connected by adhesions to everything with which it came in contact—the duodenum and ileum, the colon, mesentery and vena cava; these being separated in places by the knife, in places by tearing, the tumor was found to arise from, or be connected with, the left end of the pancreas."

Will Belladonna Arrest the Secretion of Milk?—This question has been under discussion, before the College of Physicians and Surgeons of Louisville, for some time past. According to the report of proceedings in the *Semi-Monthly Medical News*, we see the profession of Louisville is about equally divided upon the subject. The members had nearly all used it to arrest the secretion of milk and prevent mammary abscesses; some with decided benefit, and others with no perceptible influence.

We think there are two reasons for this opposite result. Belladonna is not always a reliable article—as found in the shops, it is occasionally nearly or quite inert. It is more than probable, however, that failure is often owing to its being put on trial at an improper time, and thus expecting it to work a miracle or perform an impossibility. Under such circumstances, disappointment is certain. Belladonna has often been used, as has tinc. iodine, after pus has already commenced forming, with the vague hope that, in some unexplainable way, perfect resolution would soon be accomplished. Now, such a hope always meets with disappointment. The way to test the powers of belladonna is to apply it to one breast, commencing immediately after labor, where, for any reason, it is desirable to prevent or arrest the secretion of milk. In such cases, if the article of medicine is good, and its use is judiciously made and properly persisted in, we are confident no mammary abscess will follow. Within a very few weeks, we have attended one case of abortion at three months, one at five, and a case of delivery at full term, where the child was born dead: in the three cases, belladonna was applied to both breasts, and there was no secretion of milk evident at any time in either case. Would such have probably been the result without its use? Where, from any reason, nursing cannot be performed, and the secretion of milk is to be apprehended, we say employ the belladonna early, and mammary abscess, we believe, will be of rare occurrence. He who waits until suppuration is imminent or already commenced, will be disappointed in the expectation of good results, and will doubtless complain of the inertness of belladonna.

Treatment of Epilepsy.—In the *Cleveland Medical Gazette* for December, Dr. W. F. Harvey, of Springtown, Ind., reports his method of treating epilepsy, and claims for it, perhaps, rather more than ordinary success. We have space only for his special directions, omitting his remarks upon the *rationale* of the same:

℞.—"Ferri Ferocyanureti, ... 1 drachm.
Pulv. aloes soc., ... 1 "
Sapon. duri, ... 1 sc.
Pulv. glycyrrh. glab., q. s. to make an adherent mass.

M.—Ft. pillulæ, No. 60.

S.—Two pills to be taken morning and evening, and one at noon, unless too active purging takes place. Continue the pills regularly, day after day, in as large doses as can be taken without too active purgation. Examine the spinal column throughout its whole length, on each side of the spinous process, by pretty hard pressure. If a tender spot be found anywhere, apply oil of croton tiglii, in quantity sufficient to excite pustular eruption over a space large enough to completely cover the tender part. As soon as one crop of pustules begins to heal, apply the oil on a fresh surface adjoining, and so continue for some months, or at least sufficiently long to remove the tenderness. If no sore spot be found, apply the oil on a spot of the size of a silver half-dollar, over the upper dorsal vertebra, and continue the application as above. Bathe regularly twice a week, each time morning and evening, as follows: At night on going to bed, in *warm* water, strongly (almost to saturation) impregnated with salt. In the morning following, in cool water, impregnated, as before, with salt. Let the water evaporate from the surface, leaving the salt *precipitated*."

No treatment can be alike adapted to all cases. It is probable that, in this very obstinate disease, physicians have been too ready to seize upon out-of-the-way and empirical treatment, to the neglect of more rational means. In our opinion, time and experience will determine the following to be the most successful treatment known, in cases of epilepsy of spinal origin: The bowels should be kept regular by the daily administration of a combination of aloes, rhubarb, and asafœtida; the nervous centres should be invigorated, and their integrity of action promoted, by the administration of quinine and strychnine, in average doses, continued for a considerable time. Dry cupping and counter-irritation along the spine, more particularly its upper portion, also to be persevered in. Any bilious derangement that may exist may be corrected with blue pill, and iron may be added to the treatment when indicated. It is probable that the phosphate would be found the most serviceable; in fact, we are not certain but some form of phosphorus

should form a part of the daily treatment. Where the paroxysms are preceded by premonitory symptoms, the inhalation of chloroform or ether, in moderation, continued for a time, will be found of use in warding off the paroxysm.

We are confident that this plan of treatment will stand the test of experience; and when it fails of good results, after a thorough trial, it is probable that nitrate of silver and zinc, and ferrocyanuret of iron, &c., will fail also.

Silver Ligatures.—In the *Medical Press* for December 24th, Dr. Sayre has the following in regard to the use of the silver wire as a ligature: "I am not certain, gentlemen, but that silver, as a ligature, in place of silk, is destined to become universal, and that hereafter, in our amputations, the vessels will be strangled by the silver, and then clipped close, the flaps brought in contact with the suture, and left to unite by first intention, without any silken setons hanging about the lip to create suppuration, engendering constitutional disturbance, and thereby endangering the life of the patient by secondary hæmorrhage."

Our friend, Dr. Elsworth, of this county, informed us, three years ago, that he had repeatedly ligated arteries with the common silk ligature, cut close, closed the wound, which had healed by first intention, without ever seeing any disturbance result from the retained ligature. Has any one of our many readers similar experience upon this point?

Glycerine Ointment for the Itch.—We copy from the *London Lancet* for December the following formula for the cure of that non-aristocratic disease, the itch. The formula is a favorite prescription of M. Bourguignon, of Paris. "Yolks of two eggs; essence of lavender, lemon, and mint, of each seventy-five drops; essence of cloves and cinnamon, of each 120 drops; gum tragacanth, half a drachm; well-pounded sulphur, twenty-six drachms; glycerine, thirty-two drachms. Total weight, nearly eleven ounces. Mix the essences with the yolks of eggs, add the gum tragacanth, make a good mucilage, and then add very gradually the glycerine and sulphur." One general friction of this ointment is sufficient.

"Many cures have been obtained by this preparation, which has the advantage of giving no pain." * * * "It does not grease the clothes, and has an agreeable perfume."

Treatment of Gonorrhœa.—Lectures on venereal diseases, by F. J. Bumstead, M.D., Surgeon to St. Luke's Hospital, are being published in the *New York Journal of Medicine.* The first two lectures were published before our *Summary* was commenced, and, consequently, did not fall under our observation. We shall endeavor to give our read-

ers the more important practical observations of these very interesting and comprehensive lectures.

In reference to the abortive treatment of *gonorrhœa*, in the male adult, he gives his preference to the weak, rather than the strong, solution of nitrate of silver. "The formula for the strong injection should not contain less than 10 grains of the nitrate of silver to the ounce of distilled water, and more than fifteen grains are objectionable." Of this, "only one injection will be required." The weak solution, which he prefers, should contain from one to one and a half grains to six ounces of water, and this should be repeated at short intervals, and continued until the discharges "become thin and watery" and slightly tinged with blood. Of this abortive treatment, Dr. Bumstead says: "I recommend it only in the first stage of the disease, and not after acute inflammatory symptoms have set in, or the patient suffers from scalding in passing water."

Where the abortive treatment is not appropriate, he commences treatment with a brisk cathartic, and, if the penis is much swollen, or there is much scalding in passing water, the following is advised:

R.—"Potassæ bicarbonatis, ... ℥ij.
Tincturæ hyoscyami, ... ℥j.
Mucilaginis acaciæ, ... ℥v.
A table-spoonful every three hours."

If a syringe can be inserted without much pain to the patient, the following injection is advised:

R.—"Extracti opii, ... ℈j.
Glycerine, ... ℥j.
Aquæ puræ, ... ℥iij.
M.—Injection to be used after every passage of urine."

If the case is subacute, from half to one grain of sulphate of zinc to the ounce of the mixture may be added. As a local means, for the relief of uneasiness, local pain, scalding in micturition, Dr. Bumstead fully endorses Dr. Milton's statements in regard to hot water. "Water, as hot as can be borne, is the most grateful local application that can be used."

In the third stage of gonorrhœa, Dr. Bumstead speaks very highly of injections. He says: "In spite of all that has been written and said against them, I do not hesitate to say, that the surgeon who voluntarily renounces injections, deprives himself of his best weapon in contending with gonorrhœa, and is comparatively impotent in his attempts to conquer it."

Of the kind of injections, he says: "If no other ingredients for injections, except sulphate of zinc and nitrate of silver, were known, I

believe that the therapeutics of gonorrhœa would be the gainer rather than the loser." "My own preferences for an astringent as the active principle of injections in the third stage of gonorrhœa are very strongly in favor of the sulphate of zinc." * * * "In most cases, we need not, at any period, exceed the proportion of the sulphate in the following formula:

℞.—Zinci sulphatis, ... gr. xij.
Aquæ puræ, ... ℥iv. M."

In connection with the use of the above-mentioned injections, Dr. Bumstead advises the administration of copaiba and cubebs, separately or combined. For the administration of copaiba, the following formula is recommended:

℞.—"Copaibæ,
Spiriti ætheris nitrici, . . ää., ℥j.
Liquoris potassæ, ... ℥ij.
Spiriti lavandulæ comp., . . ℥ij.
Syrupi acaciæ, ... ℥vj. M.

From a tea-spoonful to a table-spoonful after each meal."

Cubebs may be administered alone or combined with iron or quinine, if the case demands a tonic. It may be combined with copaiba, and administered in pill. "The following prescription is particularly adapted to delicate stomachs:

℞.—Copaibæ, ... ℥ij.
Magnesiæ, ... ℥j.
Olei menthæ piperitæ, . . . gtt. xx.
Pulveris cubebæ,
Bismuthi subnitratis, . . . ää., ℥ij. M.

To be divided into pills of five grains each, and coated with sugar."

From 4 to 8 are to be administered three times a day.

For the relief of the chordee, lupulin may be administered in 15-grain doses, or camphor tincture in full doses, or, if preferred, two of the following pills at bedtime:

℞.—"Lactucarii,
Pulveris camphoræ, . . ää., ℈ij.
M.—ft. pil., No. xx."

Treatment of Gleet.—In the continuation of the lectures of Dr. Bumstead on venereal diseases, the subject of *gleet* is treated of in the November issue of the *New York Journal of Medicine.* In the treatment, "the bowels should be kept open daily," and "one of the following pills taken at bedtime will usually insure a free stool in the morning:

℞.—Strychniæ, ... gr. ss.
Pil. colocynth. comp., . . . ℥ss. M.
Divide into thirty pills."

As a tonic and astringent, the muriated tincture of iron is usually indicated. The proper dose is usually from five to twenty drops, three times a day. Tincture cantharides is also indicated, and may be comcombined with the iron, as in the following formula:

℞.—"Tincturæ cantharidis, . . . ℥ij.
Tincturæ ferri chloridi, . . . ℥vj. M.
Ten drops, in water, three times a day."

Where the constitutional impairment is considerable, quinine may be added to the treatment, as in the following:

℞.—"Tincturæ cantharidis, . . ℥j.
Quiniæ sulphatis, ... ℥ss.
Tincturæ ferri chloridi, . . ℥ij.
Acidi sulphurici diluti, . . (gtt.) xxx.
Aquæ destillatæ, . . . ℥viij. M.
One ounce three times a day."

In regard to local treatment, Dr. Bumstead speaks highly of bougies. Except when they are found to aggravate the symptoms, "the passage of the bougie may be repeated every second or third day at first, and afterwards every day, or in some instances as often as twice a day." If desirable, the bougies may be medicated, and the following ointment will be found of service:

℞.—"Unguenti hydrargyri, ... ℥ss.
Extracti belladonnæ, ... ℥ss. M."

Of injections, as in gonorrhœa, he ordinarily prefers the sulphate of zinc. "From two to three grains of the sulphate of zinc to the ounce of water may be taken as the standard of medium strength, and the solution should be employed as frequently as the patient is able to pass his water, or every two or three hours." Of blisters, he does not think as highly as does Dr. Milton; in obstinate cases, however, he thinks they are worthy of trial.

Balanitis.—In continuing the subject of venereal, Dr. Bumstead devotes one lecture to *balanitis*. In regard to treatment, "All that is necessary, in most cases, is to free the parts from any collection of matter by gently washing them with tepid water, and then to cut a piece of lint or soft linen into pieces about an inch square, and laying them upon the glans with their upper margin well up in the corona, to draw the prepuce over them. In this manner the inflamed surfaces are isolated from each other, and speedily take on a more healthy action." If the case should prove obstinate, the lint may be moistened in the following mixture, and changed three or four times in the twenty-four hours:

℞.—" Extracti opii, ... ℈j.
Zinci sulphatis, ... gr. vj.
Glycerin, ... ℥j.
Aquæ, ... ℥ij. M."

Or the following may " be introduced between the glans and prepuce by means of a camel-hair pencil:

℞.—Cerati simplicis, vel. mellis,
Olei olivæ, ... ää., ℥j.
Hydrargyri chloridi, ... ℈ss.
Extracti opii, ... ℈j. M."

"The influence of a long prepuce in producing relapses of this disease has already been referred to. I have sometimes succeeded in remedying this by directing the patient to keep his prepuce constantly retracted by means of a narrow bandage around the penis, posterior to the glans." This should be worn for several weeks, and if it prove unsuccessful, " our only resort is the removal of the superfluous integument by circumcision."

REVIEWS AND BIBLIOGRAPHY.

Elements of Medical Jurisprudence. By THEODRIC ROMEYN BECK, M.D., LL.D., Professor of Materia Medica in the Albany Medical College, &c., &c., &c.; and JOHN B. BECK, M.D., Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of the City of New York, &c., &c., &c. Eleventh Edition. With Notes, by an Association of the friends of Drs. Beck. The whole revised by C. R. GILMAN, M.D., Professor of Medical Jurisprudence in the College of Physicians and Surgeons of New York. In two volumes, 8vo., pp. 884 and 1,003. Philadelphia: J. B. Lippincott & Co. 1860.

There are but few circumstances in life where physicians have appeared at greater disadvantage, been more embarrassed and discomfited in the expression of their honest convictions, and brought more disgrace upon the profession, than as medical witnesses in courts of justice. The subject of law, and of the application of medical knowledge to the judicial investigation of legal questions, is not one of the physician's every-day duties, has nothing to do with the mitigation of the physical suffering of his friends and patrons, and is, consequently, sadly neglected in his routine of daily study. Physicians of superior attainments and practical skill have often made a sorry appearance in

giving medical evidence, and felt the necessity of a more thorough acquaintance with subjects having a medico-legal bearing. Hence the importance, for our reputation and the honor of our profession, that we, as physicians, make ourselves thoroughly acquainted with the latest and best works upon Medical Jurisprudence.

Forensic Medicine is, comparatively, a recent science. The first work upon the subject was written by an Italian, but little more than two and a half centuries ago. When Paulus Zacchias published his great work, "Questiones Medico-Legales," in Rome, then the medical, as it was the political emporium of the world, near the year 1625, it was thought that Forensic Medicine had reached its acme. The work was one of great value, particularly for that time, but it was voluminous with the thousand superstitions of that superstitious age. From that day to the present, the science of Medical Jurisprudence has found earnest collaborators in Germany, France, England, and last, but not least important, in America. Among the latest and best works upon this subject, published in England, is Taylor's "Medical Jurisprudence;" the best work from the French press is probably that which has just come to us, the product of the conjoint labors of J. Briand, M.D., and Ernest Claude, and the latest written in America is the result of the conjoined labors of Wharton and Stillé. The work before us was first published in 1823, and to write a review of it in 1860 would be a work of supererogation. When we say that Beck's "Medical Jurisprudence" was first published thirty-six years ago, we hope not to deter any of the young men who have since assumed the responsible duties of our profession from consulting its pages. Since then the work has gone through several editions with corrections and additions, and to-day stands the most complete upon the subject of any in the English language. Since the tenth edition was published, the author has retired from his labors and gone to his reward. Dr. T. Romeyn Beck died four years ago, and the present editor, Prof. C. R. Gilman, M.D., says: "After his death it was ascertained that he had, with characteristic industry, collected a large amount of matter for a new edition of his treatise on Medical Jurisprudence. These materials were, by his family, placed in my hands, with a request that I would prepare the new edition for the press. Conscious of my own inabillty to do justice to such a trust, I sought aid from the friends of Dr. Beck. The required assistance was cheerfully rendered, and I was soon enabled to place most of the more important chapters in competent, as well as friendly, hands. In this way, I hope that the public are assured of a good edition of the

book, while the friends of the author have a very welcome opportunity to pay a sincere and well-deserved compliment to the memory of a wise and good man."—(*Editor's Preface.*)

The tenth edition of Beck's "Medical Jurisprudence" was published in 1850, three years before the commencement of the MONTHLY, and, consequently, the work has never been reviewed in our pages. It has, however, been so long before the profession, that we will not now attempt a review, though it may not be inappropriate to indicate the kind of talent that has been brought to bear to enrich this posthumous edition.

Chapter 1st is devoted to Feigned Diseases, and chapter 2d to Disqualifying Diseases, and both have been carefully revised by R. H. Coolidge, M.D., Assistant Surgeon of the United States Army. The additions are quite numerous and very appropriate. Chapters 3d, 4th, and 5th, respectively, upon Impotence and Sterility, Doubtful Sex, and Rape, were under the editorial supervision of Austin Flint, M.D., Professor of Clinical Medicine in the New Orleans School of Medicine. The additions to these chapters are few, and appended as foot-notes. But, if few, it was because but little was required to bring the subjects fully up to the present state of our knowledge. Chapters 6th and 7th, upon Pregnancy and Delivery, were edited by J. P. White, M.D., Professor of Obstetrics in the University of Buffalo. Some important additions have been made to the text in these chapters, but more has been done in this way by Prof. Gilman than by Prof. White.

Chapters 8, 9, 10, 11, and 12, upon subjects respectively of Infanticide, Legitimacy, Presumption of Survivorship, Age and Identity, and Insurance upon Lives, were under the exclusive editorial control of Prof. C. R. Gilman. In these chapters, the additions to the text are quite frequent and important. Chapter 13th, upon Mental Alienation, completes the first volume. This chapter is edited by D. T. Brown, M.D., Resident Physician to the Bloomingdale Lunatic Asylum, and the additions made by him and by Prof. Gilman respectively, add materially to this important chapter.

Chapter 14, upon Persons Found Dead, is edited by Prof. Gilman. Chapter 15, upon Wounds of the Living Body, is edited by John Watson, M.D., President of the New York Academy of Medicine. Chapters 16 and 17 are devoted to Poisons, and edited by B. W. McCready, M.D., Physician to the Bellevue Hospital. Chapters 18 and 19 are devoted to Irritant Poisons, and 20 and 21 to Narcotic Poisons, all of which are edited by Samuel St. John, M.D.,

Professor of Chemistry in the College of Physicians and Surgeons of New York. Chapter 22 concludes the second volume, and treats of Medical Evidence. Many and important additions have been made by the respective editors of the second, as well as the first volume. We have not the space to call attention to the respective editorial additions, and, lest we be charged with partiality and injustice, we pass the whole without special remark. It is, however, but just to say that the watchful eye of Prof. Gilman has been over the whole work, and there is scarce a page but shows his hand in the additions and revisions.

Of the first edition of this work, the *Edinburgh Medical and Surgical Journal* said: "At length, however, the English language may boast that it is possessed of a general work on Medical Jurisprudence, which will not only stand comparison with the best of the kind that the continent has produced, but which may also be referred to by every medical jurist as a monument worthy of his science, and as a criterion by which he is willing that its interest and utility should be tried. Under the unassuming title of 'Elements of Medical Jurisprudence,' Dr. Beck has presented us with a comprehensive system, which embraces almost every valuable fact or doctrine relating to it. Each of its diversified departments has been investigated so minutely, that few cases can occur in practice on which it will be necessary to seek elsewhere for further information. At the same time, by studying succinctness and shunning those verbose oratorical details with which other writers, and particularly those of France, abound, he has succeeded in rendering his treatise comprehensive within a singularly moderate compass. We may securely assert, that a work on the subject is not to be found in any language which displays so much patient and discriminating research, with so little of the mere ostentation of learning."

This opinion, expressed thirty-six years ago, and then well deserved, is pre-eminently just of the work as it now lies before us, with its many additions and revisions. The paper, typography, and binding of this edition is in the usual good style which has so long characterized the issues from the press of Lippincott & Company. O. C. G.

The Transactions of the American Medical Association. Vol. XII. Philadelphia, 1859.

The results of the meeting of the Association held in Louisville last May, and embodied in this volume, are less pretentious than the

bulky tome of the preceding year, yet in size quite large enough for convenience. The contents are not as varied as many of the preceding volumes; but as far as a cursory examination will permit us to judge, freer from objection than any of its predecessors. Six papers constitute the volume, apart from the minutes of the meeting, the address of the President, the Code of Ethics, Plan of Organization, and Catalogue of Members. These six papers take up 565 pages, and one of them alone runs through over 400, leaving an average of less than 30 pages to the other five.

The first paper is a "Report of the Special Committee on Government Meteorological Reports," by Richard H. Coolidge, M.D., which gives briefly an account of the action of the U. S. Government in relation to Meteorology, the nature of the publications issued upon the subject by the Smithsonian Institution, and the joint action of the Patent Office in carrying out, by the aid of the Medical Department of the Army and the Smithsonian Institution, an extensive plan of meteorological observations. The committee recommend that each County Medical Society should, through a regularly appointed officer, co-operate with these three government institutions in procuring a more extended series of observations, by means of a uniformly adopted register, which is given at the close of the report. We call attention to this report, and urge all County Medical Societies in this State to respond immediately to its spirit and letter.

The second report is from the "Committee on Criminal Abortion," calling upon State Medical Societies to urge to active legislation upon the subject, the Legislatures of the respective States.

The third paper is a "Report on the Medical Topography and Epidemics of California," by Thomas M. Logan, M.D., of Sacramento. An admirable and carefully-digested report, well illustrared by maps and tables, presenting the results of the author's investigations in a most satisfactory manner.

The fourth paper is a "Report on a Uniform Plan for Registration Reports of Births, Marriages, and Deaths," by W. L. Sutton, M.D., of Kentucky. This is a timely and most desirable paper. The mortuary statistics of the country at large are most unsatisfactory, and the difficulties which the student meets at every step in the investigation of the statistics of the births, marriages, and deaths throughout the Union, as a whole, can only be remedied by the adoption of some such plan as is recommended by the author of this report. A few States—and among them Rhode Island may be particularly applaud-

ed—have done much in this way; but the object of this report is to furnish a plan of registration to be adopted by all.

The last report is "On the Topography and Epidemic Diseases of Michigan," by J. H. Beech, M.D., of Michigan. This is more an earnest of a report which was intended to be made, an abstract of which was sent to the Association, but which was not completed in time for publication.

The feature of the volume is, however, the lengthy Essay of Dr. Joseph Jones, of Ga., entitled "Observations on some of the Physical, Chemical, Physiological and Pathological Phenomena of Malarial Fever." It takes over 400 pages of the volume. Our space is too limited to give even a short abstract of this valuable paper. We can only present the titles of the chapters, as an index to the whole. The first three chapters are devoted to the consideration of the nature and extent of Pathological Investigations; the fourth investigates the changes of the blood in Malarial Fever; the fifth, the changes of the organs and tissues and apparatus of the bodies of those who have died with the different types of malarial fever, intermittent, remittent, and congestive; the sixth and last considers the circulation, respiration, temperature, state of the skin, tongue, and changes of the urine in intermittent, remittent, and congestive fever; the principles of treatment based upon these observations, with numerous illustrative cases. This is one of the most valuable papers that has as yet been presented to the Association, and alone makes this volume one of the best of the series. Taken together with the other communications, though fewer in number than for several years past, they yet comprise a volume not inferior in scientific interest to any of those preceding it. D.

The New American Cyclopædia: A Popular Dictionary of General Knowledge. Edited by GEORGE RIPLEY and CHARLES A. DANA. Volume VIII. *Fugger—Haynau.* New York: D. Appleton & Co. 1859. pp. 788.

We do not believe that the regularity with which the volumes of this Cyclopædia leave the press has ever been excelled, if equaled, in the publication of any work of like magnitude. From present indications, the whole will probably be comprised in the proposed number (15) of volumes, making, when finished, the freshest Cyclopædia claiming the attention and patronage of our people.

It is impossible, of course, to examine all the articles contained in

such a publication, and our opinion must necessarily be based upon those to which accident has called our attention. Those on scientific subjects are generally accurate, concise, and *au courant* with the discoveries of the day. The collaborators are generally men acquainted with the subjects assigned them, writing *con amore*. The notice of Dr. Robert Hare is one that his eminent position, as a savant, demanded. We rejoice to find that his claims to the discovery of the compound blowpipe are properly set forth, and that his errors on the subject of spiritualism are but noticed. "Nil de mortuis nisi bonum" is as true in sentiment now as when first written by the Latin poet. Let the memory of Hare be connected with his scientific discoveries, and not with those delusions which haunted him occasionally towards the terminus of his life. The article on the Scotch philosopher, Hamilton, written by the loving hand of his greatest American admirer, is a model of biographical excellence, furnishing a most interesting account of his life and exhibit of his philosophy in a wonderfully concentrated form.

We must, however, protest against the employment of three double-columned pages for the life of one *notorious* as a traitor to his country, whose glory consists in his setting at defiance the religious and Union sentiments of his country, and whose name has been mentioned, on the stand, from Boston to Richmond, from New York to New Orleans, only to receive the detestation of Union-loving citizens, of all complexions of political faith. If such men claim a place in the Cyclopædia, let us propose that the record of their birth and residence constitute the notice, with a blank space to be filled up, by the owner of the book, with the time of their death. Our calling, as scientific men, does not allow us to mingle in politics, but our duties, as Americans, require us to condemn treachery to our Constitution at all times and in all places, and to lament anything like prominence given to the traitor. Again we urge it upon the editors and publishers to prevent the appearance of such abominations as the life of Garrison in a work so truly useful, and intended to be national, as the "New *American* Cyclopædia." L. H. S.

An Introduction to Practical Pharmacy: designed as a Text-Book for the Student, and as a Guide for the Physician and Pharmaceutist. By Edward Parrish. Second Edition, greatly enlarged and improved; with two hundred and forty-six Illustrations. Philadelphia: Blanchard & Lea. 1859. pp. 720.

The appearance of a second edition of this book shows that it

meets a want experienced both by physicians and apothecaries. There is always an amount of theory and science required in order that one shall practice, intelligently, an art. When this is collected by a competent person and properly digested, so as to be a convenient guide for the practitioner, the thanks of those practicing the art are richly due to the writer. We think we are but doing simple justice to Mr. Parrish when we say that his book is indispensable to the apothecary. The first edition was exhausted in a comparatively short time, and the second appears much improved, with an addition of "nearly two hundred pages of new matter."

To physicians, especially those who are obliged to dispense their own medicines, the book is also of great utility. Full accounts are given of the necessary implements for the dispensing of medicines, and for the accurate performance of all the processes of Galenical Pharmacy. In this latter department, the formulæ for a number of semi-officinal preparations, which have received, or do now receive, the confidence of local practitioners, are given, with proper directions for their preparation. The preparations from the organic and inorganic kingdoms are also fully explained, as well as the causes of failure which may occur in the hands of the inexperienced. And the book closes with that which is very important to our profession, a treatise on Extemporaneous Pharmacy, containing directions for the writing of prescriptions and the preparation of articles for the sick-chamber. We wish the book a wide circulation. L. H. S.

PROCEEDINGS OF SOCIETIES.

Medico-Chirurgical College. January 12, 1860. Dr. LEWIS A. SAYRE, Chairman.

DR. CARNOCHAN read a paper on "Tic Douloureux, the Painful Affection of the Face, with a new Operation for its Cure."

In this paper the author gave his views of the pathology, seat and treatment of neuralgia of the face, and described his latest operation for exsection of the trunk of the second branch of the fifth pair of nerves, as far as the foramen rotundum of the sphenoid bone—an operation which he considered an improvement on the one he first proposed for the exsection of that nerve.

Before explaining the process of the operation, he alluded to the

literature of the subject, making reference to André, a French surgeon, who, in 1756, published a work upon this disease, and gave it the name of Tic Douloureux. Fothergill, in 1782, described it in very similar terms, under the name of "painful affection of the face," but was more complete and exact in his description than the French surgeon. About the same time, Thouret, another French surgeon, published an article upon the subject. All these writers mentioned chiefly the symptomatology of the disease.

Chaussier, another French surgeon, subsequently, in determining the seat of the disease, divided neuralgia into several divisions, according as it principally affected one or the other branches of the fifth pair.

Since then, in 1834, M. Bellingeri, of Turin, has advanced the opinion of an intermittent form of neuralgia, and has instituted three divisions—the inflammatory, the irritative, and the nervous.

More recently still, M. Bérard, in 1835–'36, closely considering the subject, has arrived at the conclusion that the nerves of the fifth pair alone, in the face, can be attacked with this disease; while yet later, M. Jobert de Lamballe maintains that all the nerves of the face are liable to be attacked by neuralgia. The author of the paper, regarding the facial nerve as a mixed nerve, it being joined by a sensitive branch from the ganglion of Meckel, believes that it cannot only be the seat of neuralgia at times, but that it is frequently the conductor of neuralgic phenomena and morbid sensibility to the nervous periphery of the face, when the true seat of the disease is located in the trunk of the second branch of the fifth pair.

The lesions characteristic of this disease are differently considered by different authors, some stating that none are present, the disease being a lesion of function, the organic cause of which is unknown. The seat of the disease has been referred to distant irritations, to a foreign body acting upon the nerve, to pressure of bone upon some portion of the nervous trunks, &c. By some it is referred to increased vascularity and thickening of the nerves; while Astley Cooper, on the contrary, states that the nerves present their natural color, and are rather diminished in size than enlarged.

Medical treatment is generally unavailing, and surgical treatment has heretofore proved equally so, affording at the best but temporary relief.

In a previous paper which the author has published, he has described an operation which he had projected for a remarkable case of Tic Douloureux, which consisted in the exsection of the trunk of the second branch of the fifth pair, beyond the ganglion of Meckel, at the

same time removing that ganglion, or insulating it with its branches from the encephalon. Experience had, however, dictated another operation, which he considered far better and more feasible than the one just referred to.

DR. CARNOCHAN then related at length the case which had been the subject of his recent operation, and presented the patient to the College.

The patient, J. C. Forbes, was first attacked in May, 1849, and after trying, in vain, all medicines in vogue, in the treatment of this disease, he consulted, in February, 1852, a surgeon of this city, who operated upon him, by dissecting away the entire cheek from the superior maxillary bone, from the nose to the prominence of the malar bone, and from the alveolar border to the margin of the left orbit. Relief followed, lasting seven months. The pain again returning, he consulted, in December, 1852, the same surgeon, who divided the nerve at its exit upon the cheek, at the infra-orbital foramen. This again gave relief till the fall of 1853, when the pain once more returned. The division of the nerve was once again accomplished, in January, 1854, by another surgeon of the city, who, in addition, cauterized the divided surface of the nerve with a red-hot iron. In September, 1854, another operation, of a similar character, was performed by another surgeon, but without relief; and, in October of the same year, he consulted Dr. Valentine Mott, who twice divided the tissues of the cheek freely, by subcutaneous incisions, once in October, and once in November, with, however, but very slight relief to the pain. In January, 1855, Dr. Mott divided the nerve at the infra-orbital foramen, as it had been previously done, with relief lasting five months.

The excruciating pain again returning, notwithstanding these severe operations, he consulted Dr. Carnochan, who, on the 3d August, 1855, exposed the infra-orbital foramen, in the same manner as had been done before, but carried the dissection of the flap along the floor of the orbit for half an inch; a piece of bone of the anterior part of the infra-orbital canal was removed by the chisel and hammer, and a quarter of an inch of the exposed nerve dissected out with the scissors.

This operation was attended with some relief, but the patient returned to him in February, 1856, begging for another operation. It was then proposed to trepan the antrum maxillare, separate the trunk of the second branch of the fifth pair from its connections, as far as the posterior part of the antrum, and then to exsect a still larger portion of the nervous trunk. This operation was performed on

the 21st of February, 1856. Immunity from pain followed this operation, lasting about thirteen months, returning again in March, 1857. Upon consulting Dr. Carnochan, it was decided to operate once more, the tenth time, when the tissues were dissected back, the outer and lateral wall of the antrum cut away by bone-cutters, and the loop of nerves resulting from the anastamoses, between the branches of the posterior and anterior dental nerves, destroyed. This operation was of little avail.

In September, 1857, the eleventh operation was performed by dissecting the cheek from the bone and dividing the cicatrices, which afforded temporary relief, probably from the local depletion.

In October of the same year, 1857, the twelfth operation was decided upon, with hopes of some relief, by destroying the ramifications of nerves emanating from the ganglion of Meckel, and also those branches which emanate from the small portion of the trunk of the nerve still remaining in front of the foramen rotundum. This was accomplished on the 2d October, 1857, and gave more or less relief for twelve months, when the pain again returned in great severity, but yielded to cataplasms of stramonium leaves, so that for some time he was comparatively easy.

In June, 1859, he requested another operation, thirteenth, when the remaining portion of the trunk of the nerve in front of the foramen rotundum was exsected close to the foramen. The result thus far has been satisfactory.

Dr. Carnochan then proceeded to give some general considerations relative to the disease. The real seat of the disease he considers to be in the trunk of the nerve, in front of the Gasserian ganglion, in some part of it or in the whole of it. The causes are numerous, as pressure from various sources, sudden suppression of any of the important secretions, &c. In aggravated cases, where the trunk of the nerve is extensively diseased, no operation can be successful unless all the branches emanating from the trunk are cut off from communication with the brain. The key of an operation, then, is the removal of the ganglion of Meckel, or its insulation from the encephalon.

The steps of the operation last performed were then given in detail, and explained upon a wet preparation of a head presented to the College.

Operation.—The trunk of the second branch of the fifth pair extends from the anterior part of the Gasserian ganglion to the place of its emergence, at the foramen infra-orbitale. It does not follow a direct line from before backward, in its course, but forms a curve, the

concavity of which looks towards the mesial line. It may be divided in four parts, viz.: 1st. That between the ganglion of Gasser and the posterior orifice of the foramen rotundum ; 2d. That embraced by the circumference of the foramen; 3d. That which passes through the spheno-maxillary fossa; and 4th. That which courses along the infra-orbital canal to emerge from the infra-orbital foramen.

An incision is made, commencing opposite the spheno-maxillary fossa, upon the middle of the zygomatic arch, and extending forward and slightly downward, to a point a little below the foramen infra-orbitale. From the anterior extremity of this another incision is made downward, so as to divide entirely the tissues of the cheek and lip, midway between the median line and the commissure of the mouth. The soft tissues are now freely dissected from the malar and super-maxillary bones, and the nerve sought for as it emanates from the foramen infra-orbitale. This found, it is isolated from the other tissues, and the foramen and lower border of the orbit are completely exposed. The crown of a small trephine is then applied immediately below the infra-orbital foramen, and the antrum opened by removal of a portion of its anterior wall. This accomplished, with the chisel and Lüer's forceps, the lower part of the malar, and the outer portion of the superior maxillary bone connected with it, are removed as high upward as a line running horizontally forward, on a level with the lower border of the zygoma. The outer wall of the antrum is made bare of soft tissue, and with the bone forceps this wall is removed. The cavity of the antrum being now freely exposed, the nerve is detached from its upper wall from before backward, breaking down the wall of the infra-orbital canal, and carefully avoiding, at the same time, encroachment upon the soft tissues of the orbit.

It now remains to detach the portion of the nerve passing through the spheno-maxillary fossa with the ganglion of Meckel. At this stage of the dissection, the lower jaw must be held firmly and depressed by an assistant. The tissues lying upon the posterior wall of the antrum are separated from this part, and pushed backward by the finger and the handle of a scalpel. The spheno-maxillary fossa is now exposed, and the internal maxillary artery is seen sending off several branches, and is close related with the nerve. It is very necessary to avoid wounding this artery. By this time the trunk of the nerve is extensively detached, and it can be pulled downward so as to facilitate its isolation from the other tissues. The foramen rotundum must now be sought for. Its position can easily be ascertained by tracing with the finger the anterior border of the external pterygoid plate up-

ward to its junction with the angle formed by the *body* and the *great ala* of the sphenoid bone. Proceeding inward from the upper part of this angle, for about two lines, the foramen rotundum is reached. With a blunt hook, such as is used in strabismus, the nerve is still further detached where it emerges from the foramen. Gentle traction is now used upon the trunk thus isolated, and grazing the surface of the sphenoid bone, with delicate blunt-pointed curved scissors, the nerve is severed at the base of the skull. The ganglion of Meckel can now be removed, or the branches descending to form it, not cut, can be divided.

In the early steps of the operation the bleeding is considerable, and the vessels must be at once secured. A pledget of lint is laid in the wound, and the lips of the incisions are brought together by points of the twisted suture.

In Forbes' case, the same external incisions were made as described in the operation just described. The stump of the nerve, remaining between the posterior part of the infra-orbital canal and the foramen rotundum, was sought for and found. It was then isolated from the surrounding tissues, and divided at the point of emergence from the foramen rotundum.

In conclusion, he embodied his views in relation to aggravated neuralgia of the face in the following propositions:

I. That the second branch of the fifth pair, extending from the ganglion of Gasser to the foramen infra-orbitale, has two peripheries: one, formed by the terminal branches of the trunk, given off along its course, to the superficial parts of the face; the other, by the terminal branches emanating from the ganglion of Meckel.

II. That in cases of severe *tic douloureux*—the *dolor crucians faciei* of Fothergill—the seat of the disease is in a portion of the trunk of the nerve, or in the entire trunk, between the ganglion of Gasser and the foramen infra-orbitale, including that part embraced by the foramen.

III. That the trunk of the nerve being injured or diseased, pain is felt at its periphery, as well as in the part morbidly affected.

IV. That impressions, acting upon the periphery of the nervous trunk, will be reflected upon the trunk, and give rise to paroxysms of neuralgic pain.

V. That the ganglion of Gasser, or the *common trunk* of the fifth pair, cannot be the seat of the disease, because experiments upon living animals, and pathological facts derived from post-mortem examination, demonstrate that, when this ganglion and the trunk of the

fifth pair are destroyed or injured, the eye of the corresponding side becomes destroyed from defective nutrition, and also that the other organs of *special* sense manifest symptoms of functional disturbance.

VI. That the encephalic strands of the fifth pair, on the cerebral side of *the common trunk*, cannot be the seat of the disease; as in such condition of the brain there would be symptoms denoting cerebral disturbance or disease, which never exist in tic douloureux.

VII. That division of the nerve externally to the foramen infra-orbitale, or anterior to the diseased portion of the trunk, will not effect a cure: because the point of disease being still left, the morbid sensibility is referred to the locality of the periphery, although that has been removed, or insulated.

VIII. That when only a portion of the trunk of the nerve is removed, anterior to the ganglion of Meckel, the remaining portion may become affected with the disease, and the symptoms be renewed with the same severity as before the operation.

IX. That the only operation which will cure the disease is the exsection of the trunk of the nerve on the cerebral side of the ganglion of Meckel; because, 1st, the diseased part will thus be removed; 2d, because the two peripheries of the nerve must thus be insulated from the encephalon; 3d, because the influence of the ganglion of Meckel, in supplying morbid nervous sensibility, is destroyed; 4th, because the sensibility of the two peripheries of the nerve is obliterated, and consequently external impressions cannot be reflected or transmitted.

X. That there is a possibility of the neuralgia returning for a time, even after the exsection of the trunk beyond the ganglion of Meckel, from disease attacking the small portion of the nerve still remaining in front of the ganglion of Gasser, or from pressure upon it, resulting from osteitis and contraction of the foramen rotundum; the pain being referred, as already explained, to the original seat of the periphery.

XI. That in such a case, however, the stump of the nerve, whether diseased or compressed by the circumference of the foramen rotundum, would be placed under circumstances leading to atrophy or resolution; and that the disease, existing for a short time from such causes, would eventually subside.

XII. That the three trunks of the fifth or trifacial nerve, emanating from the ganglion of Gasser, and supplying in their aggregate the general sensibility to the face, when affected by neuralgia, are to be subjected, alike, to the same rules in regard to the etiology, pathology, and treatment.

Dr. Dewees said: I should like to ask the question, whether Dr. Carnochan has stated it to be a fact, that there can be no further neuralgia, if the nerve is exsected at the point last mentioned? Would there not be neuralgic transmission by disease of the remaining portion of the trunk, even when it was cut off at the foramen rotundum? I mean posterior to the foramen rotundum, between the foramen rotundum and the brain?

Dr. Carnochan.—In cases where the trunk of the nerve is diseased, I can readily see that, although you may cut away all the branches in front, the sensibility will be referred to the periphery. But still, I would regard this as an exceptional condition.

Dr. Dewees.—If the cause of a neuralgia were at the origin of the fifth pair, would you have peripheral neuralgia?

Dr. Carnochan.—By all rules of nervous transmission, I should think that that would be the case. Strictly speaking, neuralgia of the face must be situated at the anterior part of the trunk; at least, I have no doubt that such is the case.

Dr. Dewees.—I have a specimen obtained from a syphilitic patient, consisting of a tumor of the pons, situated near, and pressing upon, the medulla oblongata. The patient suffered from the most intense neuralgia, and I suppose that the tumor was probably the cause. The balance of the nerve was in a sound condition. Another point in this very valuable paper, which I should like to mention, has reference to the condition of the eye after division of the fifth pair. Now this condition is not owing at all or entirely to division of the fifth pair, but it is due to the injury which is done to the jugular ganglionic branches which accompany the fifth pair. When these are divided, you have opacity and subsequent suppuration of the cornea. When the fibres of the fifth are alone divided, this disorganization does not take place. I should also like to ask, whether you have operated for neuralgia of the facial, or the seventh pair, where the pain, which is of a lancinating, tearing character, is situated just behind the ear? In one case Dr. Smith operated, cutting the branch of the fifth going to the seventh, without relieving the pain, but producing paralysis of the face.

Dr. Carnochan.—I have not operated in such a case, because, in the first place, I should be unwilling to produce paralysis of the face; and for another reason more potent than that, that the facial is probably attended by branches from the ganglion of Meckel.

Dr. Worster.—Have you seen paralysis of the eye in these cases, where the nervous extremities were affected; where, for instance, the

irritation is caused by a tooth? In one case I have seen a patient suffer from severe toothache in the evening; in the morning the eye was found to be blind, and remained so for ten years. By a judicious course of tonic treatment, such as riding on horseback, exercise in the open air, the sight was finally restored.

DR. CARNOCHAN.—I have not seen such a case as that; I can easily understand how such a case could occur from neuralgia. Amaurosis, we know, follows sometimes an injury on the frontal branch of the fifth pair, and it can readily be perceived how something of the same kind might take place from injury of one of the other branches of the same nerve.

DR. WORSTER.—The case referred to presented all the symptoms of amaurosis.

DR. DEWEES.—In the case mentioned, the cause was probably owing to some disturbance of the tubercula quadrigemina; a blood-vessel bursting in the region of the tubercula quadrigemina and producing pressure, would probably be followed by instant annulment of the sight. I have known a child, which, during the daytime, was suddenly struck blind, asking why candles were not lit; death ensued, and on post-mortem examination, the tubercula quadrigemina were found to be disordered.

Dr. MEIER.—This operation is certainly one to which no objection can be raised. The ganglion of Meckel cannot be looked upon as the organ from which distinct sensation originates. Meckel himself stated that in his dissections he had met with cases in which the ganglion of Meckel was entirely absent, and yet sensation through the fifth pair had existed properly during life.

DR. NELSON.—This case reported is one of the best I have ever met with or heard of. The length of the case, the complete history that has been kept of it from day to day, is really very valuable. There is something very curious in the series of operations that were performed. After the first operation, the patient was relieved. A short time after, there was another operation, and again the patient had relief. After that four or five more operations were performed, and each time the patient was relieved. It is to be noted, that these were all performed anterior to the foramen infra-orbitale. In the last three or four of these operations, I do not think that the nerve was divided any nearer to the brain than it had been before. After that, Dr. Carnochan operated and removed a considerable portion of the nerve itself. There was an operation that might be relied upon; but still, in a short time, there was a renewal of the pain. This tic douloureux is an ex-

traordinary complaint. I do not know that it is found anywhere but in the face. Persons that have not seen a patient suffering under this disease can form no idea of the pain; there is no cutting or burning that is equal to it. While on this subject, I will relate one or two cases which are a little applicable in this connection. The first was that of an old gentleman, who complained of pain in the extremity of the penis. In describing it, he made use of the expression, "*lancinating pain.*" This is one of the characteristics of cancer. The gentlemen who were attending him, supposing that he might have cancer, quietly laid their heads together and cut off his penis. A year or two after that, the gentleman felt great pain in the penis, which had been cut off and thrown away. It was a simple case of calculus in the bladder.

I have seen some four cases of this tic douloureux, and in each case I divided the nerve, which was followed by relief for a short time. There was no complete cure, however, in any one case out of the four. I have had two other cases, both of which were quite interesting. One was a lady who complained of intense pain on the outside of the index finger. She suffered exceedingly; the pain frequently coming on in paroxysms, although she was never entirely free from pain. She applied to me for an operation. I made an opening in the palm of the hand, and cut away an inch of the branch of the median nerve, going to the finger. For a time she appeared perfectly well. The outside of the finger after the operation remained numb, and always felt cold. About two years afterwards the pain returned, although I had removed not less than an inch of the nerve.

Dr. Sayre.—Did the natural heat return with the pain?

Dr. Nelson.—No, sir; although the pain came back, the finger remained cold. I think in this case that the trouble was undoubtedly seated further back in the nerve. The second case was that of a reaper, who cut herself with a sickle on the point of the thumb. Shortly after the wound healed, she was seized with neuralgic pains in the thumb, and suffered exceedingly. After enduring it for about a year, she came to the place where I was, when I cut the nerve. This was instantly followed by relief, but eighteen months afterwards the pain returned in the same place as before. In this latter case the disease could not have had its origin in the wound inflicted with the sickle; could it be possible that it had its origin high up in the brachial plexus?

The lady who suffered from pain in the index finger thinks that it had its origin from pricking herself with a needle.

DR. SAYRE inquired as to the longest interval between the operations in Dr. Carnochan's case.

DR. CARNOCHAN.—It is seven months since the last operation.

DR. SAYRE also wished to inquire whether he had discovered, in cutting out the nerve, any new formation that resembled nerve.

DR. CARNOCHAN.—Yes, there was. After the first operation, there seemed to be a filling up, where the nerve had been exsected, of nervous fibrillæ.

DR. SAYRE.—Will not nervous junction again take place, even after the ganglion of Meckel has been cut away?

DR. CARNOCHAN.—I think not; nervous reproduction must certainly have some limit, just like bone. If you exsect a small portion from the tibia it will be reproduced; but exsect a larger portion, and the osseous reproduction will be incomplete.

DR. DEWEES remarked, that he did not suppose that there were any new real nerve-corpuscles re-developed in these cases.

DR. SAYRE then related the following case: A gentleman pricked his foot with a thorn. This was followed by symptoms very much resembling tetanic spasms, under the influence of which he would become nearly wild, and become, in fact, almost crazy with the pain. When the foot was freely laid open he would be free from pain, so long as the wound remained unhealed. When the wound became healed, he suffered as much pain as ever. Obtaining no relief, he came to this city and consulted Dr. Parker, who removed a portion of the tibial nerve; he recovered and remained well for three or four months, after which time the pain returned, and he again applied for an operation. On this occasion about two and a half inches of the nerve were removed. He was then free from pain for about a year, when it returned, and became so intense, that he insisted on the leg being amputated. The operation was accordingly performed by Dr. Sabine, and I had an opportunity to dissect the limb, and found that the nerve was replaced. I did not examine it microscopically, but so far as I could judge by the knife and the eye, it appeared to be nerve, and the fact was that the portion which had replaced the exsected part could not be distinguished from the rest. The preparation is now in the museum of the College of Physicians and Surgeons. The man was restored to health, and for four or five years after the operation, during which time I watched him, had no new attack. I must confess that in this case, if the disease was seated above, I do not see how cutting off the limb would prevent the disease.

Academy of Medicine. Regular Meeting, January 4th, 1860.
Dr. JOHN WATSON, President, in the Chair.

The Academy met at its usual hour, the special business of the meeting being the annual election of officers. During the progress of the election, the subject of Diphtheria was introduced to the Academy by the President, who called upon the members to give their views relative especially to the differential diagnosis between it and croup, muguet, measles, putrid sore throat, &c. He stated that much confusion existed upon this point, and that, in a recent work published by the New Sydenham Society, in which several papers upon the subject, by different authors, were brought together, there was no clear definition given to distinguish it from the diseases he had mentioned.

DR. FRANCIS referred to the richness of the literature of croup. He spoke in admiration of the writings of Bard and Bailey, of New York, who were among the earliest in this country, and indeed in any country, to give a definition to this disease. He regarded croup as an inflammatory disease, and believed in the great efficacy of emetics, and of vitriolic emetics in particular. He had given a tea-spoonful of a saturated solution of sulphate of zinc every half hour, and esteemed this treatment very highly.

DR. KISSAM also regarded croup as of an inflammatory nature, accompanied by a disposition of the blood, which favored the deposition of a false membrane, upon blistered surfaces, the edges of a wound after tracheotomy, as well as upon the mucous surfaces. He favored the use of calomel in the early stages of the disease, which, if persevered in, he had reason to believe had prevented the disease from progressing to the more advanced and fatal stages. In conjunction with this treatment, he had used antimonials in small doses.

DR. VAN BUREN drew a line between that form of croup which comes on suddenly at night, and readily yields to a mild emetic, and the more insidious form which is attended by an exudation. The first was spasmodic, the latter true croup. He did not believe in bloodletting, and had not seen any good results from calomel. The use of vapor of warm water he favored, and had derived great benefit in some severe cases from the local applications of nitrate of silver.

DR. PERCY thought there had been an evident change in the type of the disease during the last few years. Croup, he thought, now presented more of an asthenic character than heretofore. In the treatment of the disease he had never used calomel, but he had found most decided beneficial results from frequently repeated doses of alum. This suggestion, he said, he owed to Dr. Miller, and he had cause to con-

gratulate himself upon the prompt and efficient action of this form of medication. Emesis was almost instantly produced, which was not attended by any great degree of prostration, as from other forms of emetics. He had also been in the habit of giving veratrum viride to control the circulation, and had reduced the pulse from 150 to 100, keeping it there by means of the veratrum without producing any emetic action.

DR. DOUGLAS mentioned the division of croup in true and false; the latter being of a spasmodic character, needing little or no treatment; the former of an inflammatory type, requiring active medication. The disease now prevalent he considered as different from either of these. It was a blood disease, and had its differential characteristics which distinguished it from membranous croup. In the one there was a discharge from the nostrils, which was thin, acrid, excoriating the nares, often sanious in severe cases, which was not present in the other.

In diphtheria, the countenance was usually flushed: not confined to the cheeks, as in croupous pneumonia, but suffused; not of a bright red, but a red tinged with yellow. In membranous croup, the countenance, on the contrary, was almost universally pale. The cough, too, presented marked differences. The sharp, ringing, dry, metallic cough, so prominent in membranous croup, was wanting; the angle having a moist, liquid character in diphtheria. So, too, the respiration, which is labored and very frequent in membranous croup, is not increased to the same degree in diphtheria; the mechanical obstruction not being so great in the latter as the former.

These had been the peculiar differences he had remarked in the cases which had fallen under his observation. In one case which he had recently attended, the respiration was almost natural in frequency, averaging only 24 in a minute; the child being nine years old. The pulse maintained a fair ratio to the respiration—about as five to one—but was easily accelerated on the least exertion. There was an evident prostration of the forces, which would not admit of any depletory measures of any kind; and, viewing this disease as a blood disease, he did not think that calomel was admissible, though he could conceive that in membranous croup, with a firm exudation, it might be used to advantage. In the disease we have now under consideration, he esteemed a supporting treatment called for, and placed most reliance upon quinine and iron, in connection with some stimulants and a proper diet.

DR. B. F. BARKER remarked, that when in Albany last year, in attendance upon the State Medical Society, he had seen several cases

of diphtheria, which was then prevalent in that city as an epidemic. He recalled one case which he visited with the attending physician, and had seen the child sitting up in bed playing with intelligence clear, but presenting the symptoms of this disease in a marked manner. He asked the physician his prognosis of this case. It was, that the patient would die within twenty-four hours. He had not seen a case from that time till late in the fall of last year, when he was called to see a lady in this city, who had been unwell for a fortnight from general debility. He was called at night on account of her being unable to pass her urine. This state had existed for over twenty-four hours, and the hypogastrium, upon examination, was found distended, and tender to the touch. An attempt to pass a catheter gave her great pain, when she was put under the influence of chloroform, and a large quantity of water drawn off. This gave but temporary relief. Opium was given internally and by suppositories and injections, and warm fomentations applied to the vulva, all without bringing any relief. Upon examination the next day, he found the vulva, the labia, and meatus covered with a membranous exudation similar to that he had seen in diphtheria. He immediately applied a strong solution of nitrate of silver, for the purpose of breaking up this exudation. After the exudation was removed, he applied to the parts a saturated solution of the chlorate of potash. He also gave the chlorate of potash internally, together with tonics and good diet. He mentioned this case as illustrative of the fact that this disease does not affect the mucous surfaces of the air-passages alone, but that all mucous surfaces exposed to the air are subject to diphtheritic exudation. He believed that the tendency of the blood, in this disease, was to *disorganization*, and that the vital powers required to be supported by a tonic plan of treatment.

Dr. Gardner resumed the discussion of Diphtherite, by saying that he had seen some cases of this disease, and while he agreed with Drs. Douglas and Barker in the views they had expressed, thought they had omitted two distinct features peculiar to diphtherite; that it was not only epidemic, but eminently contagious, and that a disagreeable diagnostic smell always accompanied the flow from the nose. He thought a vigorous tonic treatment and local applications to the throat were demanded. The membranous exudation, he thought, differed from that of membranous croup, by being less strong and tenacious, and not ever, in his experience, running down so as to make casts of the bronchi. He trusted that Dr. Jacobi, who had just entered, and who had a large experience in this disease, would give his views.

DR. JACOBI.—The main thing observed in diphtheria are the symptoms of entire dissolution of the blood. Hence it was difficult to make a correct diagnosis without the membranes being seen, as the general symptoms of the dissolution of the blood are very similar to those in other diseases, presenting the same character, such as scarlet fever, measles, etc. It would be very difficult, therefore, to make a strict diagnosis without the membranes being observed.

The membrane usually is seen on the tonsils and the uvula; but it is not necessarily confined to the throat; he had seen them on almost every mucous membrane of the body, especially on the mucous membrane of the vagina. The great majority of cases of diphtheria are so slight that there is hardly any necessity for medical interference; still, not unfrequently they assume a severe and dangerous character.

As to treatment, his experience, especially during the last two or three months, was not much in favor of the use of caustic to the membrane itself; and if this local medication had any beneficial effects, he thought that they were limited to the portions of mucous membrane on which no exudation had yet taken place, and where it might possibly prevent it.

Internally, the chlorate of potash and iron, especially the fluid preparations of the latter, and large doses of quinia, especially in such cases as set in with fever, were used. Lately, Dr. Jacobi had substituted chlorate of soda for the chlorate of potash. Chlorate of potash requires sixteen, chlorate of soda only three or four parts of water to dissolve it. He had repeated the experiments made by some French pathologists, and found that the diphtheritic membrane was more readily macerated in a saturated solution of chlorate of soda than of chlorate of potash.

While it was true that no essential difference could be detected between the membranous exudation of croup and that of diphtheria, yet there was a wide and characteristic difference between the two diseases. *Croup* had nothing to do with dissolution of the blood, while dissolution of the blood was the *main* pathological character of *diphtheria;* it is related, in this respect, to scarlet fever, measles, and typhus fever, all of which present this general morbid condition of the system.

DR. DOUGLAS inquired of Dr. Jacobi, what his experience was as regards the presence of albumen in the urine. He stated that he had not found it in the cases he had examined.

DR. JACOBI replied, that this albuminuria had been pointed out as a prominent symptom by Dr. See, of Paris, but that he had found it present in only about 25 per cent. of the cases he had examined.

Dr. Barker looked upon croup as a local disease, just as much as a pleuritis or a hepatitis. The constitutional symptoms attending croup are symptoms resulting from the local inflammation. *Diphtheria* is a *constitutional* disease, resulting from some specific poison, a certain *materies morbi*, attended with a local manifestation on the mucous membranes, chiefly of the throat. In *diphtheria* the *constitutional* symptoms precede the disease; in croup, the local disease precedes the constitutional. Another *point*—he was not aware that death from diphtheria ever results from the mechanical obstruction of the membrane, producing asphyxia; whereas, in croup, he believed that death is very frequently attributable to the obstruction of the membrane alone, although not always, death sometimes resulting from the violence of the constitutional reaction.

The tellers then announced the names of the following officers, who were elected to fill vacancies:

Dr. M. D. Van Pelt, *Vice-President.*

Dr. Jacob Harsen, *Trustee.*

Dr. Gurdon Buck, *Committee on Education.*

Dr. James Warren, *Committee on Ethics.*

Dr. S. S. Purple, *Committee on Admissions.*

Dr. Thomas moved that Diphtheria, its differential diagnosis from Croup, and the Statistics of Tracheotomy, be the subject of discussion for the next meeting of the Academy.

EDITORIAL AND MISCELLANEOUS.

— We are enabled to announce that, with the next issue of the Monthly, we shall commence the publication of a valuable series of practical Lectures upon "Displacements of the Uterus," by E. R. Peaslee, M.D., Professor of Obstetrics and Diseases of Women and Children, in the New York Medical College. In presenting this new feature in our journal, we are confident we shall meet with the approbation of our readers, and that the lectures of Prof. Peaslee will prove to them a source of much attraction and information.

— The large amount of copy which has crowded upon our hands the last month prevents us from giving the usual quota of editorial and miscellaneous matter. We have been obliged to omit the proceedings of the last meetings of both the Medico-Chirurgical College and the Academy of Medicine. In the former, an interesting discus-

sion on Morbus Coxarius was held; and in the latter, the continuation of the discussion on Diphtheria. We shall endeavor to find space for these next month. Several short articles which we had prepared for this portion of our journal are crowded out.

— The *Kansas City Medical and Surgical Review*, a prospectus of which we received some weeks ago, has made its appearance. It is edited by Drs. G. M. B. Maughs and T. S. Case, contains 48 pages, and has for its original communications, among others, an article on "The Medical Topography of Kansas City and adjacent Country," by its senior editor, and another on the "Origin of Malarious Diseases," by Dr. Case. We wish our Western confrères, living in the shadow of the Rocky Mountains, an abundance of success.

— The last number of the *Boston Medical and Surgical Journal* closed the sixty-first volume of that oldest of the weeklies. In it we find the valedictory of the editors, Drs. Morland and Minot, who have so ably conducted this journal during the last five years.

The publisher announces, in the same number, that Drs. F. E. Oliver and Calvin Ellis will, with the issue of February 2d, assume the editorial care of the journal.

While we are sorry to part with the former editors, we welcome the coming ones into the editorial corps of our profession.

— In order that the *Monthly Summary*, which is prepared for our pages by Dr. O. C. Gibbs, of Frewsburg, N. Y., may be a complete mirror of the medical periodical literature of the day, we would be pleased if the editors of the different journals would double their exchanges with us, sending the duplicate copy to Dr. Gibbs' address. Upon our part, we will send a copy of the MONTHLY to any address which may be indicated by the editors of the journals who may comply with our request.

— The N. Y. Pathological Society is about to issue a volume of its transactions. This Society has now been in existence many years, and a collection of the most important of the communications made to it will be a most valuable addition to the literature of our profession. The reports of this Society have appeared in this and other journals of the country, so that the character of these transactions are well known, and need no explanation from us. For the benefit of those who may desire to have this volume, we will add, that but a limited number will be printed, and that to insure a copy, it would be prudent to subscribe for it. This may be done by addressing the Secretary, Dr. E. Lee Jones, 795 Broadway, N. Y. The price of the volume will be two dollars.

Items.—M. Courty, of Montpellier, has, he says, cured a lady of an attack of asthma, on whom, for four years, all the usual remedies had been tried in vain. His remedial agent was to inject six drops of a solution of sulphate of atropine, under the skin, as near as possible to the pneumo-gastric nerve.

— Dr. Burdel, of Vierzon, has stated to the French Academy, through M. Bernard, that intermittent fevers are always accompanied with glucosuria. Morgagni so firmly believes in the contagion of phthisis, that he admits, in his letters, to have scarcely ever made an autopsy of a tuberculous person.

— Laennec inoculated himself with tuberculous matter, and Alibert and Biett inoculated themselves with cancerous matter; and all the three concluded, from the absence of any local results, that these morbid products were inoculable. It is a curious fact, nevertheless, that Laennec should have died phthisical, and Alibert and Biett of carcinomatous affections.

— The French Academy of Sciences has received information of a new esculent of the tubercular kind, called *Shicama*, which grows in the neighborhood of Cuenza, near Granada.

— In 1813, De Quincey increased the quantity and frequency of his doses of opium so much, that he took 320 grains daily. Prodigious as this quantity is, it is only half what Coleridge was in the habit of taking.

— In Austria there are 330 public civil and 159 military hospitals, relieving about 400,000 persons a year; 40 lunatic asylums, with 6,000 inhabitants; 40 maternity hospitals, with 60,000 births per annum; 33 houses for enfants-trouvés, with 24,000 infants.

— The records of deaths in Paris, from 1708 to 1767, being 57 years, shows that long and severe winters were a cause of unusual mortality. By tables of mortality we are able to tell the number of persons who survive; thus making death take a census of the living. For example, in Paris, at one period, it was found that one death occurred out of every 35 persons. Take, therefore, the annual average of 18,000 deaths and multiply that by 35, and it gives 630,000 as the number of living inhabitants.

— According to statistics made by the French Institute, the months in which the greatest number of persons die are March, April, and May; and in which the fewest are August, July, and September.

— Professor Virchow, of Vienna, announces the discovery of the microscopic insect, *Trichina spiralis*, in the muscles of man.

Books and Pamphlets Received.

Elements of Medical Jurisprudence. By Theodoric Romeyn Beck, M.D., LL.D., &c., &c., and John B. Beck, M.D., &c. Eleventh Edition. With Notes by an association of the friends of Drs. Beck. The whole revised by C. R. Gilman, M.D., &c. Two volumes. Philadelphia: J. B. Lippincott & Co. 1860.

The Diagnosis, Pathology, and Treatment of the Diseases of the Chest. By W. W. Gerhard, M.D., &c. Fourth edition; revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1860.

The Obstetric Catechism. By Joseph Warrington, M.D. 150 Illustrations. Philadelphia: J. B. Lippincott & Co. 1860.

A Treatise on Microscopical Diagnosis. By Gustav Von Dueben, &c. Translated, with additions, by Prof. Louis Bauer, M.D., &c. New York: John Wiley.

A Monograph upon Aconite: its Therapeutic and Physiological Effects, &c. Translated from the German of Dr. Reil. By Henry B. Millard, A.M., M.D. New York: William Radde. 1860.

The Life and Labors of Laennec: an Introductory Address. By Austin Flint, M.D.

Botany as an Ally of Medicine: a Lecture delivered to the Medical Society of the University of Nashville. By George S. Blackie, M.D., &c. Nashville. 1859.

Transactions of the Ninth Annual Meeting of the Illinois State Medical Society, held in Decatur, June 7th, 1859. Chicago. 1859.

Braithwaite's Retrospect of Practical Medicine and Surgery. Part XL. New York: W. A. Townsend & Co. 1860.

An Epitome of Braithwaite's Retrospect. In Five Parts. By Walter P. Wells, M.D. New York: Charles T. Evans, 1860.

On Criminal Abortion in America. By Horatio R. Storer, M.D., &c. Philadelphia: J. B. Lippincott & Co. 1860.

The Application of Photography to Medical Science, including a Process for Photographing the Microscopic Field. By Ransford E. Van Gieson, M.D. New York. 1860.

The Transactions of the American Medical Association. Vol. XII. Philadelphia. 1859.

Therapeutics and Materia Medica: a Systematic Treatise on the Action and Uses of Medicinal Agents, including their Description and History. By Alfred Stillé, M.D., &c., &c. Two vols. Philadelphia: Blanchard & Lea. 1860.

A Practical Treatise on Fractures and Dislocations. By F. H. Hamilton, M.D., &c. Illustrated with 289 wood-cuts. Philadelphia: Blanchard & Lea. 1860.

Introductory Lectures and Addresses on Medical Subjects, delivered chiefly before the Medical Classes of the University of Pennsylvania. By George B. Wood, M.D., LL.D., &c. Philadelphia: J. B. Lippincott & Co. 1859.

Proceedings of the American Pharmaceutical Association, at the Eighth Annual Meeting held in Boston, Mass. Boston: George C. Rand & Avery. 1859.

Human Physiology, Statical and Dynamical; or, the Conditions and Course of the Life of Man. By John William Draper, M.D., LL.D., &c. Second Edition. New York: Harper & Brothers.